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Original Lectures.

ARTICLE I.

HEREDITARY TAINTS. An illustrated lecture delivered before the Chicago Medical Society, Feb. 17th, 1879, by EPHRAIM CUTTER, M.D., Boston.

"*Nothing taints sound lungs sooner than inspiring the breath of consumptive lungs.*"—*Harvey.*

Hereditary traits are those which are transmitted from parent to child. They may be good or bad. The latter are called taints (Greek, *teggo*, to wet: Latin, *tingere*, to dye or tincture.) To-day the subject involves heredity, which also includes physical, psychological, civil, social, political and monetary abilities and disabilities.

In compliance with your expressed desire to see what I have to show and to hear what I have to say, I come as a private from the picket line to report to his superiors—didactically, not polemically. "To prevent rash misconceptions and uncandid reflections that are always apt to arise from a partial view of any subject," allow me to say that I am prepared to be challenged, and

to encounter opposite opinions—that I desire to be respectful to all—that I honor an honest, gentlemanly, though severe critic, but any discourteous treatment of my subject I regard as beneath the dignity of science; that my presentation of the subject is the fruit of years of toil and investigation, and is what I honestly believe it is here represented to be. If shown to be mistaken, I am ready to apologize, but I will not ask pardon for acting up to my convictions. Time alone can decide the questions raised.

In his voluminous, painstaking and authoritative work, Dr. Lionel Beale has extensively promulgated his idea respecting an hereditary taint, teaching that the primitive, formative, animal vital matter called by Mohl protoplasm (*proto*, first; *plasm*, form, mould or substance), and by him (Beale) called bioplasm, (*bio*, life; plasm), (Dr. L. Elsberg calls it better, bioplasson, life *forming*, instead of form)—has a degenerative or lowered type impressed upon it so that it develops what we call disease. In other words, that the taint consists of bioplasm running riot under mob law, breaking through the bodily systemic restraint that governs the various minor organisms of substance, which, when combined in a well-ordered and systematic colony we call a healthy human being. Dr. Beale has rendered a great service to mankind by liberating us from the thralldom of the cell doctrine. The greatness, number and value of his contributions to micrology (*micros*, small; *logos*, account), have made him famous. If I understand him rightly, cancer, syphilis and consumption—to name no more examples—are hereditary in that the dyed or tinged, or tinctured bioplasm in the parent is transmitted to the child—that it is not any morphologically distinctive thing, but is only discernable through the ruin wrought by its development—as seedsmen tell seeds by cultivation. If my opinion were asked, I would say that this doctrine is admirable for the cancerous diathesis, but as far as concerns the other diseases named, there is another man who, in 1868, propounded another doctrine—incidentally, as a matter of history, not intending to conflict with nor derogate from any other theorist. In the *American Journal of the Medical Sciences* for Jan., 1868, page 19, line 12, occur these words: (the title of the paper is "New Algoid Vegetations in Syphilis, etc.")—"This vegetation may

be transmitted from one individual to another during the secondary and tertiary stages under proper conditions, without producing the primary disease. I have noticed many instances in which, the father having had the disease previous to marriage, and when the poison was not entirely eliminated, even though no outward manifestation of the disease had shown itself in him after marriage, this vegetation was transmitted to, and found in the blood of the wife and children many years after. In many cases of this kind, this vegetation produces no visible impression upon the systems to which it is transferred, while upon others it produces more or less marked constitutional disturbance." That is, the vegetation found in the blood of the parent is found in the blood of the child, and thus we have an hereditary taint which is a physical substance capable of being seen, the seeds, so to speak, of which are smaller than the red corpuscles, and therefore capable of infecting the child through the medium of the blood, it being an evident mechanical proposition that as the blood corpuscles of the mother are freely transmitted to the fœtal circulation, then any bodies smaller than the red corpuscles floating in the maternal blood will of necessity be readily found in the blood of the embryo, or, to put it differently, the seeds of the vegetation are the seeds of the disease, and find their way into the blood of the fœtus through the placenta.

It is my design to throw upon the screen some physical evidence of this statement. A ten years experience is my warrant for presenting it. I have found this evidence of practical value. Quietly I have been able to settle in my own mind, without using words, the diagnosis of syphilis, and to institute treatment accordingly, which the result has proved to be correct. Were this a matter of scientific interest alone, I should not feel justified in staking my professional character and reputation by appearing before you with my present purpose. I am only following in the steps of my great master, "whose shoe-latchet I am unworthy to loose." Who is this master? The following is a list of his works up to July, 1878: there are 42 papers and books, and 20 unpublished works and papers. I am not competent to express an opinion as to all, but I do know that some of them show a clearer insight into the nature of our common and most fatal

diseases than I have found elsewhere. I respectfully ask a careful perusal of this list, should copies of it come into your possession.

PUBLISHED WORKS AND PAPERS OF J. H. SALISBURY, A.M., M.D.

1. Analysis of Fruits, Vegetables and Grains. N. Y. State Geological Reports. 1847-48-49.

2. PRIZE ESSAY.—Chemical Investigation of the Maize Plant in its various stages of growth, with the temperature of the soil at various depths, and that of trees in different seasons of the year. 206 pages. State Agricultural Reports of N. Y. and Ohio. 1849.

3. Chemical Analysis of Five Varieties of the Cabbage. 1850.

4. Rheum Rhaponticum. Chemical examination of the various parts of the plant. 1850.

5. Chemical Examination of Rumex crispus. 1855.

6. Experiments and Observations on the Influence of Poisons and Medicinal Agents upon Plants. 1851.

7. Chemical Examination of the Fruit of five (5) varieties of Apples. 1850.

8. Chemical Investigations connected with the Tomato, the Fruit of the Egg Plant, and Pods of the Okra. 1851.

9. History, Culture and Composition of Apium graveolens and Cichorium intibus. 1851.

10. Some Facts and Remarks on the Indigestibility of Food. 1852.

11. Compositions of Grains, Vegetables and Fruits. Ohio State Agricultural Reports. 1861.

12. Microscopic Researches, resulting in the discovery of what appears to be the cause of the so-called "Blight" in Apple, Pear and Quince Trees, and the decay in their fruit: and the discovery of the cause of the so-called "*Blister and Curl*" in the leaves of Peach Trees; with some observations on the development of the Peach Fungus. Illustrated with 6 plates. Ohio State Agricultural Reports. 1863.

13. Chronic Diarrhœa and its Complications, or the diseases arising in Armies from a too exclusive use of Amylaceous Food, with interesting matter relating to the Diet and Treatment of these abnormal conditions, and a new Army Ration proposed with which this large class of diseases may be avoided. The Ohio Surgeon General's Report for 1864.

14. Something about Cryptogams, Fermentation and Disease. St. Louis *Medical Reporter*, February, 1869.

15. Probable Source of the Steatozoon folliculorum. St. Louis *Medical Reporter*. January, 1869.

16. Investigations, Chemical and Microscopical, resulting in what appears to be the Discovery of a New Function of the Spleen and Mesenteric and Lymphatic Glands. Do. August, 1867. 29 pages.

17. Defective Alimentation a Primary Cause of Disease. Do. March and April 1 and 15, 1868. 70 pages and two plates of illustrations.

18. On the Cause of Intermittent and Remittent Fevers, with Investigations which tend to prove that these affections are caused by certain species

of Palmellæ. *American Journal Medical Sciences*, 1866. Also in *Revue Scientifique*. November, 1869.

19. Some Experiments on Poisoning with the Vegetable Alkaloids. *American Journal Medical Sciences*. October, 1862. 28 pages.

20. Discovery of Cholesterine and Seroline as secretions in health of the Salivary, Tear, Mammary and Sudorific Glands; of the Testis and Ovary; of the Kidneys in Hepatic Derangements; of Mucous Membranes when congested and inflamed, and the fluids of Ascites and that of Spina Bifida. Do., April, 1863. 2 plates. 17 pages.

21. Remarks on Fungi, with an Account of Experiments showing the influence of the Fungi of Wheat and Rye Straw on the Human System, and some observations which point to them as the probable source of Camp Measles, and perhaps of Measles generally. Do., July, 1862. 1 plate. 20 pages.

22. Inoculating the Human System with Straw Fungi to protect it against contagion of Measles, with some additional observations relating to the influence of Fungoid growths in producing disease, and in the Fermentation and Putrefaction of Organic Bodies. Do., October, 1862. 8 pages.

23. Parasitic Forms Developed in Parent Epithelial Cells of the Urinary and Genital Organs, and in the Secretions. With 34 illustrations. Do. April, 1868.

24. Remarks on the Structure, Functions and Classification of the Parent Gland Cells, with Miscroscopic Investigations relative to the causes of the several varieties of Rheumatism, and directions for their treatment. 1 plate of illustrations. Do., October, 1867. 19 pages.

25. Microscopic Researches relating to the Histology and Minute Anatomy of the Spleen and Lacteal and Lymphatic Glands, showing their ultimate structure and their organic elements, of their highly interesting and important functions, with some remarks on the cause of ropiness of Mucus and the tendency of all healthy and many diseased cells to be metamorphosed into filaments. 1 plate. 34 pages. Do., April, 1866.

26. Description of two new Algoid Vegetations, one of which appears to be the specific cause of Syphilis and the other of Gonorrhœa. With 16 illustrations. Do., 1867. Also *Zeitschrift für Parasitenkunde*. 1878.

27. Geological Report of the Mill Creek Canal Coal Field. With one map and two plates. Published in Cincinnati, 1859.

28. Analysis, Organic and Inorganic, of the Cucumber. *Cultivator*. 1849.

28. Experiments on the Capillary Attractions of the Soil, explaining some important and interesting principles and phenomena in Agriculture and Geology. *The American Polytechnic Journal*. 1853.

30. A New Carbonic Acid Apparatus. Do., 1853.

31. Analysis of Dead Sea Water. 1854.

32. Two Interesting Parasitic Diseases; one we take from sucking kittens and the other from sucking puppies—Trichosis Felinus and T. Caninus. *Boston Medical and Surgical Journal*, June 4th, 1868. 6 illustrations. Also, *Zeitschrift für Parasitenkunde*, Hallier. Jena., 1875.

33. Pus. and Infection. *Boston Journal of Chemistry.* January, 1878.

34. Microscopic Examinations of Blood and the Vegetations found in Variola, Vaccine and Typhoid Fever. 66 pages and 62 illustrations. Published by Moorehead, Bond & Co., New York. 1868.

35. Vegetations found in the Blood of Patients Suffering from Erysipelas. *Halliers Zeitschrift für Parasitenkunde.* 1873. 8 illustrations.

36. Infusorial Catarrh and Asthma. 18 illustrations. Do., 1873.

37. Analysis, Organic and Inorganic, of the White Sugar Beet. The *Albany Cultivator.* October, 1851.

38. Analysis, Organic and Inorganic, of the Parsnip. N. Y. State Agricultural Report. 1851.

39. Ancient Rock and Earth Writing and Inscriptions of the Mound-builders, with a description of their fortifications, enclosures, mounds and other earth and rock works. 49 plates. In the hands of the American Antiquarian Society, and only partly published in their transactions and in the Ohio Centennial Report. 1863.

40. Influence of the Position of the Body upon the Heart's Action *American Journal Medical Sciences.* 1865.

41. Material Application of Chemistry to Agriculture. The *Albany Cultivator.* 1851.

42. Analysis, Organic and Inorganic, of the several kinds of Grains and Vegetables. The *Albany Cultivator.* August, 1849.

UNPUBLISHED WORKS AND PAPERS.

1. Diphtheria, its Cause and Treatment. 3 plates of illustrations. 1862.

2. Asthma, the various forms of, and their causes and treatment. 3 plates of illustrations. Ready for press since 1866.

3. Consumption, its Causes and Treatment. 4 plates. Ready for press in 1867.

4. Hog Cholera, its Cause and Prevention. 1858.

5. Ultimate Structure and Functions of the Liver. 1865. 3 plates.

6. Ultimate Structure and Functions of the Kidneys. 1864. 2 plates.

7. Geological Report of the Coal Fields of Virginia and Kentucky. 1857. With maps and many illustrations.

8. Histology of Plants. Prize Essay. 65 illustrations. 1848.

9. Causes and Treatment of "Bright's Disease." 1865.

10. Causes and Treatment of Diabetes. 1864.

11. Causes and Treatment of Goitre, Cretinism, Ovarian Tumors and other Colloid Diseases. 1863.

12. Causes and Treatment of Progressive Locomotor Ataxy. 1867.

13. Cause and Treatment of Fatty Diseases of the Heart, Liver and Spleen. 1864.

14. Cause and Treatment of Paresis. 1865.

15. One of the Most Common Causes of Paralysis, with Treatment. 1867.

16. Microscopic Examinations connected with Spermatozoa and Ova, with contents of Pollen Grains and Modes of Development of Zoosporoid Cells. 1860.

17. Cryptogamic Spores in the Tissues of the Living Animal. Their development in food one source of disease, and a cause of fermentation, gangrene or death and decay in organized bodies. 7 plates and 102 illustrations.

18. Microscopic Investigations connected with the Exudation and Expectoration of Angina membranaceæ and Gangrenosa and Scarlatina Anginosa, resulting in the discovery of their true source, and the pathological process by which the exudations are produced; and the further discovery of a peculiar fungus belonging to the Genus Peronospora, developing in the sloughs and membranes, the spores of which are infectious and produce the disease; also some general conclusions on the Ætiology of Fevers, the peculiar functions of the Epithelial cell envelope, and the probable way in which the system receives a more or less permanent protective immunity by one attack of certain contagious diseases against a second invasion of the same. 3 plates. 160 illustrations. 1862.

19. Description of several new species of Ascaridæ found on and in the human body, and a brief account of several new Entozoa. 2 plates and 30 figures. 1865.

20. Investigations connected with the Cause and Treatment of Paralysis of the Will, Paralysis of the Memory and Paralysis of the entire Intellectual and Moral Faculties, causing a peculiar mental state and Insanity.

Dr. Salisbury regards the vegetation in syphilis as a true taint, since it will grow in any one to whom it is communicated by infection. The taint in consumption is not so readily imparted by infection. It is made up of vegetative spores of a yeast in the blood, not exactly the ordinary domestic yeast, but a saccharine, acid, fermentative vegetation that thrives on starch and sugar. It is found in the blood of the parent. It is found in the blood of the child. It exists in a latent state and is found also one year before organic lung disease. I have seen Dr. Salisbury's records of the autopsies of 104 frogs killed by inducing consumption in them artificially. (Ready for the press in 1867.) I call this the synthesis of the disease. Also I show you bread raised with the yeast found in the diarrhœal dejections of a third stage consumptive, made at Dr. Salisbury's suggestion, and following the same course he pursued years ago. He was unable to raise bread with healthy fecal dejections. I am now engaged in the effort to publish Dr. Salisbury's works on the causes and treatment of consumption based on 1,000 cases, ready for the press in 1867, corroborated by me. Fasciculus I, A New Physical Sign of the Pretubercular State; II, Morphology of Consumptive Blood; III, Treatment on the Salisbury Plan. About 1,500 page

of manuscript fully illustrated. In this work will be found the fullest account of the author's views on the subject of tubercle. Upon consultation it has been deemed best to publish it by subscription, and my effort is to secure 1,000 subscriptions. I respectfully ask your encouragement in this undertaking.

Your attention is now directed to the question 1, What is yeast? This is a cryptogamic vegetation, well known to man from the earliest ages of antiquity, and now of common use in every household, growing concealed in the darkness where there are warmth and moisture, a plant that is little larger than a red blood corpuscle; a plant that produces alcohol, that has a kinetic energy of 200 lbs. to the square inch; one that is a protoplasm, and that thus furnishes a clear illustration of a fungus and of what the author regards as an hereditary taint. We will show these and a few other fungi, some of which are nocent and some innocent. 2. I show a few algae, some nocent and some innocent, in order to exhibit a genus of parasitic vegetations that includes 20,000 species—(fungi, 8,000, Reinsch)—so that you may see what they resemble, and may realize that the opposition to the germ theory of disease is fallacious, since it is based upon the idea that because so many fungi are innocent, therefore they *all are*. Mushrooms are fungi, and people have been known to die, poisoned by eating them. 3. I show what blood is morphologically in healthy men, and in some animals. 4. The form element found in syphilitic blood, constituting the taint. 5. Consumptive blood taints. 6. Two photographs showing the physical effects on the blood of the Salisbury plan of treatment. 7. Sources of error.

List of microphotographs shown, most of them taken with Tolles' objectives.

1. Microphotographic apparatus of the writer.

2. Vaccine virus, 1-10th inch objective, to illustrate Beale's doctrine.

3, 4, 5, 6, 7, 8, 9. Yeast plants, spores, barley, starch, grain, 1-50th. (For the sake of brevity the words "inch, objective," are hereafter omitted.)

10. Budding of yeast. After Mitscherlich diagram.

11, 12. Mycelial filaments found in connection with yeast; aërial, 1-10.

13. Yeast sporangia, 1-75.

14. Butyric acid, fermentative vegetation, (rancid butter), 1-10.

15. Lard, 1-10.

16. Sewer gas fermentative vegetation, 1-10.

17. Diphtheritic membrane kept 3½ years, in full strength carbolic acid, 1-10.

18. Algae. Leptothrix buccalis from mouths, innocent, ¼.

19. Algae infesting other algae, some nocent and some innocent. After Reinsch.

20. Innocent parasitic algae in a Key West sea weed, Reinsch, ¼.

21. Cosmarium binoculatum infested by an alga that kills its hosts. Cochituate water, 1-10, R.

22. Healthy blood, horse, 1-50.

23. Healthy blood, man's, living white corpuscle, 1-50.

24, 25, 26. Amœboid movement of white blood corpuscle—photos. of drawings made from images thrown upon a screen with the sun, from life, 1-5.

27. Human red blood corpuscles, dry, 1-75.

28. Rat's blood, dead, 1-50.

29. Ox, alive, 1-50.

30. Horse, 1-50, alive.

31. Rabbit dead and frozen, 1-50.

32. Sheep, alive, 1-50.

33. Deer dead and frozen, 1-50.

34. Dog, alive, 1-50.

35. Mouse, dead, 1-50.

36. Trout dead and frozen. The last nine were taken at the same amplification for medico-legal comparison.

37. Blue bird's blood, 1-16.

39. Frog's blood, 1-50.

40. Blood filled with spores that may be syphilitic or consumptive, distinguished under the microscope (not in photo.) by the copper color, 1-10. Wet.

41. 3 white corpuscles, syphilis—enlarged—wet, ¼.

42. Mycelial filaments, syphilis—wet, ¼ enlarged.
43. " " " dry, 1-50.
44. " " " wet, 1.16.
45. " " " enlarged.
46. White and red corpuscles, syphilis, 1-50.
47, 48. White and red corpuscles, syphilis, 1-75.
49. Pretubercular blood showing spores—an hereditary taint —found one year before organic lung disease, wet.
50. Collection of mycelial filaments, consumptive, 1-5. Blood dried under the cover.
51. Consumptive blood drying under cover, vacuolated, shows the futility of taking blood home for examination after several days.
52. Mycelial filament, consumptive blood, wet, ¼ enlarged.
53. Dried mycelial filaments traversing an air bubble—wet and drying up, 1-10.
54. White blood corpuscles, consumptive, 1-50.
54. 4 " " " 1-50.
56. 3 " " " 1-75. First photo. taken with this objective.
57. White blood corpuscle showing entophytal growth, consumptive, 1-50, certified to by Prof. Reinsch.
58. Fibrin filaments, 1-16 wet, consumptive. Foreign substances liable to be mixed with the blood.
59. Hair, 1-10; consumptive, wet.
60. Epithelial scale from the skin, 1-10 wet.
61. Cotton fiber fibrillated, wet, 1-10.
62. Dust from furniture, wet, 1-10.
63. Common toilet soap, 1-10.
64. Typical 3d stage consumptive blood, 1-16, dry.
65. " " " " three months on the Salisbury plan, 1-16, dry,

In order to do justice to my associate, allow me to say that this microphotographic work was done with the assistance of Dr. G. B. Harriman, dentist, of Boston, the owner of the 1-50 and 1-75 inch objective, which he has allowed me to bring. He is also the discoverer of fibers in Dentine (*American Journal of Dental*

Science, May, 1870), and of nerve fibers in the soft solids of the Dentine (*Dental Cosmos*, January, 1870.)

The following extract from the *Journal de Micrographie*, Paris, November, 1877, is the concluding portion of a notice by Dr. Pelleton of the work done by Dr. Harriman and other microphotographers of Boston. Some of the specimens exhibited to you this evening were included in the collection to which Dr. Pelleton refers:

"To sum up, these microphotographs, which we think ought to interest our readers for a long time, because of the considerable interest which the photographic reproduction of microscopic objects presents are remarkable; and so much the more as all have been executed by, except, of course, those who transferred the impression to the stereotype plate, doctors, who are amateurs, and not by professional photographers. The work is of a nature to give a high idea of the objectives with which the views have been obtained; and we can compare them only to the best photographs executed by Dr. Woodward with the $\frac{1}{8}$ and 21-16 inch objectives of Powell and Lealand, or by some European operators with obectives of Hartnack and Prazmonski; but if we think we have seen some which are as remarkable, we do not think we have encountered any that are their superiors."

It remains for me to thank you for your fair hearing. I do not ask your endorsement of my views. It took three years to satisfy myself. I hope it will not take you so long; nor do I hope you will dismiss the question at once by declaring the whole matter visionary—a matter of mere words—the vagaries of an enthusiastic microscopist. On general principles, those who study a subject most, are usually conceded to know the most about it. Dr. Salisbury began in 1857, I in 1868; hence it is hoped that some of your careful observers may be induced to go over the ground for themselves, carefully, in actual cases—not deciding till they have seen the work here discussed, as of course a public presentation like this must necessarily pass by many important points. Allow me simply to name a few essentials: 1. The blood must be inspected in the shortest possible space of time after withdrawal. (I have invented a machine to get a drop of blood more quickly.) 2. The objective must be good as to color and definition. Such

an one can be obtained of the Boston Optical Works—Tolles', third class, 1-5 inch, with clinical stand (suggested by me) for $25. This instrument is portable and can be used with any first class objective. (The photos. of yeast, 1-50 inch objective, were taken with this clinical stand.) Ten minutes object teaching suffices to get an idea of this simple instrument. Further, in connection with my associates, I am preparing a clinical microscopic primer for the use of those who are willing to learn. I am glad to say to the older men, who relegate such work to young men, that, strange though it seem, microscopy is a solace of old age. Shrewbury worked with it till his death at about 90 years. A good microscope strengthens the eyes, in place of weakening them.

Finally, I may be mistaken, and past experience may not be realized in the future; but I think that should Dr. Salisbury's and my own experience be repeated (I do not say it will be) by all physicians in the United States, 13,000 lives could be annually saved by the detection of the taints of the pretubercular state alone. I believe it a duty to promulgate these views. I should like to see published the full text, of which but a few pages have been given. I desire that some influential authoritative body appoint a commission of 100 medical men of commanding character. Let them send patients to Dr. Salisbury and myself, or some one else, for one year's treatment on the Salisbury plan, the records to be kept, blood to be photographed and information to be from time to time given to the committee of 100, without discussion or controversy. At the year's end let the authoritative body summon the committee of 100 in council. By its decision after faithful work we would abide. The John Hopkins foundation could furnish such an opportunity. Dr. Salisbury wants such a test. I am willing to conduct it.

Gentlemen, if you can express a favorable opinion on the work of this evening, please to say that you approve of such a test in Baltimore.

CHICAGO, February 17th, 1879.

Original Communications.

ARTICLE II.

NOTES ON SUBINVOLUTION. BY D. T. NELSON, M.D., Professor of Physiology, Chicago Medical College. Read before the Gynæcological Society, February 28, 1879.

As early as 1843 Sir James Simpson called the attention of the profession to this condition of the uterus, under the name of "Morbid Permanence of the State of Puerperal Hypertrophy," and in the same paper described his uterine sound—now so well and favorably known—as an efficient instrument in the diagnosis of this and many other diseases in and around the uterus.

In another paper, read before the Edinburgh Obstetric Society in 1852, he treats of the same subject under the title "Morbid Deficiency and Morbid Excess in the Involution of the Uterus After Delivery." In this paper he uses the term super-involution to designate an excess, and the word subinvolution to indicate a deficiency in the normal involution after delivery.

Since this last paper by Prof. Simpson, subinvolution has been recognized as a form of uterine diseases, but it was to insist upon the importance of its early recognition and appropriate treatment that I proposed this as the topic for discussion this evening.

Prof. Simpson, in the paper referred to, so graphically describes the growth of the pregnant uterus and its involution after delivery, that I cannot do better than read his description. "It is," he says, "a kind of physiological hypertrophy, unequalled, either in regard to its magnitude or its rapidity, in any other organ in the adult human body; for, during the forty weeks of utero-gestation, the uterus enlarges from nearly 3 inches in length

and 1¾ inches in breadth to 12 or 15 inches in length and 9 to 10 inches in breadth. It increases from about 2 ounces in weight to 25 or 30 ounces. The cavity of the uterus before impregnation is less than one cubic inch, while at the full term of pregnancy it is extended to above 400 cubic inches; and the surface of the organ increases from about 5 or 6 square inches to nearly 350 square inches. Before impregnation, the uterine cavity would not hold above a dram or two of fluid; at the end of the ninth month of utero-gestation, its contents usually weigh from 120 to 150 ounces.

The rapidity, however, with which the uterus diminishes in size after delivery is perhaps still more marvellous than the rapidity with which it increases in size after impregnation; for, while it takes forty weeks to attain the dimensions of the fully developed uterus of pregnancy, it requires only from four to eight weeks to decrease to the small size of the same organ in its impregnated condition."

While such is the normal course during involution of the uterus, there are, unfortunately, very many cases in which it does not pursue this natural course, but, for a variety of reasons, after miscarriage especially, and after labor at full term as well, it remains permanently enlarged.

What then are the causes of subinvolution?

In regard to time, they may be arranged in three groups.

1. Those operating previous to the pregnancy.
2. Those occurring at the date of confinement.
3. Those subsequent to delivery.

1. Those operating previous to the pregnancy.

a. Constitutional diseases impairing muscular strength and nervous power, such as tuberculosis, scrofula, syphilis and the like.

b. Local disease, interfering with the normal functions of the pelvic organs, such as pelvic peritonitis and cellulitis, with their subsequent adhesions.

c. Tumors in or near the uterus, such as fibroid and fibro-cystic with extra-uterine fœtation.

d. Enlargement of the uterus, the result of previous miscarriage or pregnant labors.

2. Those occurring at the time of confinement.

a. Over-distention of the uterine walls; by a large fœtus, unusual quantity of liquor amnii, twins and the like.

b. Delay in delivery from the numerous causes of tedious labor.

c. Parturient injuries of the uterus and its appendages, such as rupture of the walls of the womb, laceration of the cervix, vagina and perineum; injuries of the uterus, or its appendages, in the production of a miscarriage; adherent placenta; flooding, producing clots to be retained.

3. Those occurring subsequent to delivery.

a. Puerperal fever, in its various forms of septicæmia, peritonitis, metritis and, possibly, something more than a combination of these in the epidemic form.

b. And then the milder types of fever, such as intermittent fever—the fever attending the disorders of the breasts; phlegmasia alba dolens and the various forms of "slight cold."

c. The absence of nursing and its consequent reflex stimulation of the uterus.

d. Improper exercise before involution is complete, displacing the uterus and so interfering with its circulation and producing a passive congestion.

e. And, at times, insufficient exercise, with bad hygienic influences, producing deficient vital activity without at first well marked disease.

f. Constipation of the bowels, with the accompanying hæmorrhoids, fissures and ulcers of the anus.

g. Too frequent sexual intercourse; the physiological congestion of erection passing into the pathological congestion which accompanies inflammation.

Unfortunately, many of these causes may be combined in the same patient, and thus mutually aid in the certainty of the result—subinvolution.

Consequences of subinvolution.—It is perhaps the most frequent cause of the malpositions of the uterus, such as prolapsus, version and flexion. The uterus being enlarged and, consequently, heavier, its natural supports are not capable of holding it in its normal place in the pelvis, and hence the varieties of prolapsus and version, for the fœtus has gone from the uterus,

and this was the normal excitant in giving tone to the nervous, vascular, and especially the muscular structure of the organs of generation. During pregnancy these organs are, when excited, very like those in a stage of erection, and from their tonic firmness, are not only as easily displaced, but after miscarriage or delivery at full term, if the uterus remains enlarged, this normal tonicity is gone and displacements easily follow.

The cavity of the uterus, too, is large and the walls, including the cervix, soft and flexible, offering favorable conditions for flexions, if the cervix is held firmly while forces from above press downward upon the fundus.

More or less engorgement with blood must necessarily accompany subinvolution; for, while pregnancy existed, all the tissues of the uterus were increased in quantity, the vascular, together with the muscular and nervous, and even the peritoneum; and this physiological congestion offers a favorable nidus for influences capable of exciting inflammation to produce their legitimate results.

The whole thickness of the uterine walls may become inflamed in this way. Metritis, including even the peritoneum and the adjacent areolar tissue; perimetritis; or the mucous membrane alone may be the location of the inflammation; endometritis and the discharges from the placental wound may produce disease of the mucous membrane around, which will extend through the cervix to the vagina, and even to the external organs; cervicitis and vaginitis and the development of the nervous tissue in the uterus renders the transmission easy of the influences that will produce inflammation.

Again, the muscular fibres are undergoing—imperfectly, it is true—a retrograde metamorphosis, offering favorable conditions for inflammation, depressed vitality with active nutrition.

The vascular structures, too, including both the lymphatic and blood vessels are in the best possible condition to absorb morbid products and to assist inflammatory processes.

A moment's attention to the size of the placental wound after delivery at full term, when the uterus measures 8, 10, or even 12 inches in depth, as compared with its size when firmly contracted, and but four or five inches in depth, will convince any

one that the opportunities for septic absorption are greatly increased by imperfect contraction of the uterus, the beginning of subinvolution. Indeed, the dangers do not correspond with the size of the placental wound, but are even greater.

After miscarriage, though the placental wound is not as large and the lymphatic and blood vessels not as highly developed, the remains of placental tissue and blood clots are quite as likely to be present and induce septicæmia. And the muscular structure not being as much developed does not contract as thoroughly.

The unusual development of the nervous structures in the uterus, in subinvolution, explains the reflex symptoms of pelvic disease so constantly complained of by such patients and dated back by them, in their origin, to a miscarriage, or the birth of a child.

This excessive development of the nervous structures of the uterus, connecting with both the sympathetic and spinal systems of nerves, renders reflex transmission easy to any part of the body. Hence the gynæcologist is not surprised to find the symptoms of pelvic disease, especially in subinvolution, reflected to any part of the body.

The following illustrative cases were to me exceedingly suggestive and instructive:

Case I.—Mrs. C. S., married, age 36, Swede, servant, doing general housework. Gave birth to twins 13 years since. No pregnancy before or since. No headache or other symptom of uterine disease, except some backache and the dysuria for which the patient consulted me. At first, not knowing or suspecting the patient had been married or borne children, I prescribed simple diuretics and then other diuretics with the bromides. Not getting the least relief from the dysuria (there was no cystitis), and it had already continued six or eight weeks, I made more careful inquiry into the patient's previous history, and found, as stated above, that she had given birth to twins 13 years previous, but had had no special symptoms of pelvic disease, except during the past two months. Examined uterus July 25th, 1873. Very much enlarged — nearly 12½ centimeters in depth — but little other evidence of disease; a simple case of subinvolution of 13 years standing. A single application of the fluid solution of

carbolic acid to the uterus relieved the dysuria at once, all internal medication being omitted. The relief was so complete that it was difficult to prevail upon the patient to have any further local treatment. But the same application was made at the end of a week, August 9th, the same local application, with the fluid extract of ergot, 2 C. C., three times a day internally, the only internal treatment since local applications were commenced. August 16th, treatment continued; uterus 11½ Cm. The ergot was continued but a short time; for the patient could not be prevailed upon to take it—not appreciating the need of it. Five more applications were made of carbolic acid, making nine in all, at intervals of one or two weeks, and November 13th my record was: uterus, 9 Cm.; patient thinks herself well, and will not come for further treatment.

Case II.—Mrs. E. W. S., American, age 35, music teacher, married 7 years, one miscarriage 4 years since, not pregnant before or since, menses regular, some dysmenorrhœa; bowels loose, especially after menses, 9 or 10 stools a day, about 4 at other times; urine hot and high colored when stools are frequent, not at other times—very anæmic; uterus examined Oct. 8th, 1873. Endometritis, some anteflexion, uterus 9 Cm. The first application to the uterus stopped the diarrhœa without any other treatment, and it never returned. Twelve subsequent applications were made between this time and May 7th, 1874, when, my record says, she seems entirely cured, though still somewhat anæmic. During this time, iron, strychnine and other tonics were given internally, though none during the first six months of treatment. Saw patient in the summer of 1878; no return of diarrhœa, still moderately anæmic.

Treatment of subinvolution.—The treatment is readily suggested by the nature of the cause or causes in each particular case, and without specifying the kind for each class of cases, I will simply emphasize the importance of watching the uterus after delivery at full term, and especially after miscarriage, to determine whether involution is going on normally, and if not to prevent subinvolution by internal, and if need be, local treatment.

All cases of confinement, whether premature or at full term, should be under the care of a competent physician during the

whole period of involution, and this is normally from one to two months, and not one to two weeks, the usual time of attendance. And by weekly examinations, he should determine whether involution is going on normally or not, and if not, he should adopt such measures as will assist it.

The use of the corn or rye ergot immediately after delivery, and during the few days following, if the uterus does not remain firmly contracted, will usually ensure such a result. And by preventing the formation of clots in the uterus, it will, in great measure prevent after pains in multipara, and as there will be no clots to decompose, this source of septicæmia will be avoided.

The use of quinine or some other anti-periodic at this same time, in doses up to, or just short of cinchonism, is likely to prevent the onset of the milder forms of fever, and by circulating in the blood, to act as an antiseptic in preventing the severer forms, and so indirectly, if not directly, facilitate involution.

I will mention but two other remedies; strychnia, and the mineral acids, as likely to aid digestion and promote the normal contraction of the uterus, by their action upon the nervous system.

If, at the end of a month, six weeks, or at the most two months, the depth of the uterus is not less than four inches, local treatment should be commenced and continued with appropriate internal remedies until involution is complete.

No parturient woman should be allowed to resume her full duties, or consider herself fully recovered, until involution is complete. If she does, she risks her future health, and perhaps even her life; and no physician fullfils his duty who does not instruct his patients in these things.

ARTICLE III.

ATROPIA, DUBOISIA, ESERINE, PILOCARPIN AND MUSCARINE.

By Dr. E. L. HOLMES, of Chicago. Read before the Chicago Medical Society, March 17, 1879.

A few facts regarding the last four alkaloids, as used in ophthalmic practice, will not, I trust, be without interest to members of this society.

The action of atropia is so well known to the profession that it is necessary simply to allude to it in this paper to compare its effects with those of the other agents above mentioned; especially as a recent paper, read before this society, discussed those injurious effects of atropine upon the eye, which are not very unfrequently observed by every specialist.

Although the addition of sodæ sulph. or of morph. sulph. to the solution of atropine reduces its tendency to irritate the eye, a new mydriatic has been thought desirable.

Hyoscyamin and extracts of hyoscyamus, as well as those of stramonium, are unreliable.

De Wecker, of Paris, was one of the first to bring to notice a new remedy, duboisia, obtained first (March, 1878) by Petit, of Paris, and soon after by Garrold, of London. This is a product of a small tree growing in Southern Australia.

I have seen but two specimens of the drug; a single grain of duboisia, which is a yellowish resinous substance, and a gram of the neutral sulphate of duboisia, a light brown syrup-like fluid—price, $15. If experience shall demonstrate that this remedy is so valuable as some have predicted, its cost will undoubtedly be decreased. A dollar a grain, however, is a small price for a remedy which alone, in an exceptional case, may be able to save an eye.

According to De Wecker and others, who have used duboisia in cases in which atropine was not tolerated, it possesses the properties of dilating the pupil and paralyzing the accommodation more rapidly than atropine.

I have substituted duboisia for atropine in a case of keratitis, in which prolonged use of the latter had caused great irritation of the conjunctiva and swelling of the lids. These symptoms at once subsided with the use of duboisia, 0.06, aqua, 60.0.

Two valuable remedies have in recent times been added to ophthalmic materia medica—eserine, an active principle of Calaber bean, and pilocarpine, derived from jaborandi.

Both alkaloids possess the property of causing contraction of the pupil and spasm of the ciliary muscles. Patients under its influence see distinctly objects only relatively near. Patients under the influence of atropine see distinctly only objects relatively far.

The influence of eserine and pilocarpine is much less durable than that of atropine.

As far as I am aware, experiments with eserine have been more numerous than those with pilocarpine, although it has been stated that the nitrate of pilocarpine, as also the muriate, which is most in use, is less irritating to the tissues of the eye than eserine.

The solution of eserine loses its strength quite rapidly by decomposition, while that of pilocarpine is stable and, I think, less expensive than that of eserine.

Eserine has been used with benefit in the following conditions: In glaucoma, staphyloma and conical cornea, ulcer of the cornea, with or without hypopion; when the iris has been recently engaged in a penetrating wound or perforating ulcer of the cornea.

It is also stated that it reduces suppuration of the conjunctiva (keratitis), and inflammation of the nasal duct and of the sack. While atropine is supposed to dilate the vessels of the eye, eserine contracts them.

These alkaloids are both contra-indicated when there is a tendency to iritis. They are of almost absolutely no benefit in producing a permanent contraction of the pupil in idiopathic mydriasis.

I need but refer to the fact that while atropine may relieve excessive sweating, pilocarpine induces it.

I have prescribed nitrate of pilocarpine in two cases of keratitis punctata, which is very often an obstinate disease. It not only produced no irritation but gave perfect and speedy relief to the patients.

In a case of staphyloma with an increase of tension, and in a conical cornea with ulceration and conjunctivitis, but with no increase of tension, pilocarpine relieved the active symptoms. Its use in three cases of ulcer of the cornea, with quite severe conjunctivitis, was without benefit. It was applied to the conjunctiva in a one per cent. solution.

Muscarine is one of the active principles of poisonous mushrooms. It has been but little used in treating diseases of the eye. Its singular properties, however, have led physiologists to study its action, not only on the general system, but also on the eye. It is described as a syrup-like alkaloid, soluable in water, without

color, taste or smell. Experiments show that its effects are quite constant in causing spasm of the accommodative apparatus.

Its power to contract the pupil varies in degree somewhat in different individuals.

By suitable union of atropine and muscarine, there may be dilatation of the pupil and spasm of the ciliary muscle in the same eye.

Muscarine in poisonous doses produces an arrest of the heart's action by its effects on the inhibitory nerves of this organ. Atropine, administered internally, or especially hypodermically, tends to neutralize the effects of muscarine on the heart.

It may be of interest to the general practitioner that atropine in doses of 1-100 of a grain, given at suitable intervals, should be administered to patients who have partaken too freely of poisonous mushrooms.

The literature of this subject is confined principally to the *Archives of Ophthalmology—Monatsblaetter f. Augenheilkunde* and the *Journal of Mental and Nervous Diseases*, which give references to the labors of various experimenters in France and Germany.

ARTICLE IV.

THE INCONVENIENCES OF THE PLASTER JACKET, AND HOW TO AVOID THEM. By EDMUND ANDREWS, A.M., M.D.

One evil of the plaster of Paris jacket is the impossibility of removing it for the purpose of bathing. Perspiration often accumulates underneath it, and becomes very offensive and adapted to generate disease, so that it becomes necessary, if the patient's life is to be that of a civilized human being, to construct a new jacket in from two to four weeks.

Another trouble is the impossibility of varying the tightness of the appliance to suit the varying plumpness or thinness of the patient.

A third trouble is the disagreeable suspension of the body by the head and shoulders, the frequent repetition of which awakens

great dread in the minds of some patients. A few practical remarks on the efforts which have been made to overcome these difficulities, will be of great use to many members of the profession.

In order to produce an apparatus that can be removed at pleasure, for bathing and other purposes, and which can be rendered tight or loose at will, Prof. Yandell, of Louisville, has constructed the following apparatus: A thin plaster of Paris jacket is first applied in the ordinary way. This is immediately removed and made use of merely as a mould from which to cast a fac simile in plaster of the patient's body. Around this model he then winds alternate layers of cloth bandage and manilla paper dipped in glue. After this has been laid on to the thickness of 3 or 4 mm., it is allowed to dry into a solid mass. A strip about 5 centimeters wide is then removed from the median line in front, and the whole finished by gluing in a soft lining, and inserting eyelets or hooks for lacing. The elasticity of the material allows this apparatus to be taken from the body at pleasure, by simply springing it open in front. When laced up it has all the rigidity of the plaster jacket, and it can be brought to any degree of tightness.

To avoid the destruction of the apparatus by the strain upon its texture in springing it open, Dr. Chas. Fegers, of McHenry, Ills, has devised a similar jacket, but with an opening both before and behind. The posterior one, about 3 centimeters wide, is closed with cloth, free from glue, which extending around the sides encloses between its layers the more inflexible material, and firmly adheres to them. In front the jacket is closed by lacing strings running through eyelets or hooks, as in Prof. Yandell's jacket. This furnishes a perfectly flexible cloth hinge down the back, which enables the apparatns to be opened and closed more easily than the other. Dr. Fegers has applied his apparatus to a number of cases with excellent results.

Suspension by the head and shoulders is extremely disagreeable, and even painful to some persons. It involves the risk, too, that should the patient present one of those cases of relaxed cervical articulation, which sometimes exist, the strain on the hooks might result in the fearful disaster of a dislocated neck.

Besides, the suspension apparatus is cumbersome and not generally possessed by the physician.

All these inconviences and risks can be avoided, and the best possible position for the patient secured in a very simple manner, and without any apparatus whatever.

In case of a child, if one assistant support the inferior extremities, and the other the head and shoulders, and hold the body in a horizontal position with the face downwards, the center of the spine will fall and tend to straighten the curve, and accomplish the desired extension as perfectly as can be done with the suspension apparatus; the patient being held in this position, the surgeon can apply the plaster bandage in the usual way, and then remove it by dividing in the back or front, and use it for a mould for the construction of a Yandell's or Feger's jacket, as above mentioned.

In case of an adult patient, two tables can be placed end to end with space between them equal to the length of the patient's trunk, pillows being placed beneath his shoulders and hips; he is laid face downward with the trunk extending across the space between the tables; an assistant helping to maintain the position of the patient at either end. The surgeon may now apply the jacket just as before detailed. From a considerable experience, I am prepared to assert that the results obtained by this method of horizontal suspension are in every way equal to those following the perpendicular hanging, while the process itself is simple and far less disagreeable to the patient.

The plan of taking moulds for spinal cases in the prone, horizontal position with the chief support at the hips and shoulders, so as to allow the body between to settle downward, and thus correct the curvature, was introduced into Chicago some ten years ago, by the late Prof. Sherman, as a means of preparing his leather backed corset-supporter. Prof. Sayre afterwards employed a similar position in what he called the "turtle shell" plan; and probably many others have resorted to such an obvious method of fitting aparatus, so that one cannot readily settle the question of priority. Of late years the suspension plan has become fashionable, and is almost exclusively used at the present time.

The difficulties and possible dangers of the perpendicular hanging process appear a little formidable to practitioners who are unaccustomed to it, but the simplicity and comparative comfort of the horizontal suspension is such that any ordinary physician can undertake it without hesitation.

No. 6 16th St., Chicago, March 13, 1879.

PICTURES FROM THE PARISIAN HOSPITAL.—Professor (who has his class in the wards) to patient, "What is your occupation?" Patient (who has pulmonary disease), "Musician, sir." Professor, to class: "There, gentlemen, at last I have the opportunity of demonstrating what I have often told you in the lecture room, that the wear and tear on the respiratory tract caused by the blowing of musical instruments, is a fertile source of just such difficulty as our patient here labors under. (To patient) What instrument do you play, sir?" Patient: "The bass drum!"

MILK-TEST.—A German paper gives a test for watered milk which is simplicity itself. A well polished knitting needle is dipped into a deep vessel of milk and immediately withdrawn in an upright position. If the sample is pure, some of the fluid will hang to the needle; but if even a small proportion of water has been added to the milk, the fluid will not so adhere.—*Med. Record.*

COMA AND ALCOHOL.—Dr. Macewen, of Glasgow, lays down the rule that an insensible person who, being left undisturbed for from ten to thirty minutes, has contracted pupils, which dilate on his being shaken, without any return of consciousness, and then contract again, can be laboring under no other condition than alcoholic coma.

IN A discussion on cremation at a London club, a member is credited with the argument, "We *earn* our living; why should we not *urn* our dead?"

Clinical Reports.

ARTICLE V.

NOTES FROM PRIVATE PRACTICE.

I. Spontaneous Rupture of Aorta.

S. S., female, aged 30, having been treated three days for acute dyspepsia by means of anodynes and laxatives, was on the evening of February 27, suddenly seized with most intense pain in the back; collapse immediately supervened, and death occurred in about one hour.

An autopsy nine hours later revealed a rupture of the abdominal aorta just above its bifurcation, the rent being about two centimeters in length; a large quantity (*fully two litres*) of coagulated blood was found behind the peritoneum; arterial coats discolored and softened from a point just above the origin of the renal arteries to the bifurcation; no aneurismal enlargement—indeed, the caliber of the vessel was less than usual; thoracic and abdominal organs nearly normal.

This case illustrates the necessity of autopsies in many instances; the friends of this patient firmly believed that she died of inflammation of the stomach, until they witnessed the post mortem, notwithstanding my assertion to the contrary.

II. Hypodermic Use of Morphia.

Was called a short time since to treat W. S., male, aged 62, for acute dyspepsia (bilious attack), accompanied by very severe pain. Administered hypodermically, in hypogastric region, morphia sulph. 0.02. Before the syringe was emptied, alarming syncope supervened, and recurred twice, at intervals of ten or

fifteen minutes; stimulants administered freely, artificial respiration and the use of electricity were successful in reviving the patient. Neither narcotism nor coma were in any degree present. Is it possible to attribute the syncope to the effects of the drug? Not over fifteen seconds were occupied in the operation.

H. L. HARRINGTON.

ARTICLE VI.

Cupping in Anthrax.

In the early period of my practice, some 40 years ago, I used the cups in the treatment of local diseases more often than now.

During this period I had to treat a bad case of carbuncle, situated on the back of the neck of an old man. While dressing it one day, it struck me forcibly that cupping would be just the treatment for this case.

Calling for a large goblet and some cotton, I applied it as a cup, after expanding the air by burning cotton in it. The effects were truly wonderful—drawing out from the very interior of the tumor a large amount of pus and corruption, which gave immediate relief. The night following, the old gentleman rested for the first time.

Since this experiment, the first one of which I ever heard or knew, I have relied mainly on the cups for the local treatment of carbuncle.

It fulfills the most important indications in the local treatment of this often troublesome and sometimes dangerous disease. It relieves tension and pain, and limits gangrene of the cellular tissue. It materially shortens the time of cure. With appropriate general treatment, the disease is thus shorn of half its pain duration and danger.

The cups may be applied once or twice a day or even oftener. If resorted to in the early stage, the scalpel or lancet should be used to induce a free flow of blood. Mere dry cupping at this time would increase the flow of blood to the tumor without relief. I would caution against too severe cupping until pus is formed

I more often use a large, blunt rimmed tumbler or goblet than any other kind of cup. The size of the opening of the cup should be, if possible, sufficiently large to cover the base of the tumor. An air-pump attached to the cup, if at hand, would be much more manageable and convenient, but the tumbler and cotton may be used with almost equally good effect, if adroitly done, besides having this advantage, of being always available.

H. HUNT, M.D.

BELOIT, WIS., Feb. 15, 1879.

SOLUTION OF CANTHARIDINE IN CHLOROFORM.—Dr. Coutisson. (*Thése de Paris*, 1878, *Archives de Médecine*, January, 1879.)

Dr. Laboulbène employs a ten per cent. solution. If this solution be applied to the skin, there is seen a quite active congestion at the end of half an hour; sometimes even a quarter of an hour is sufficient for the lifting up of the epidermis, and in five or six hours, sometimes earlier, according to the resistance of the epidermis, vesication is produced. The phlyctenæ continue to increase for six or eight hours, then remain stationary for twenty-four or thirty-six hours, and finally wither.

The sensation is rather one of heat, or even burning, than of very violent pain; indeed this supportable sensation makes cantharidine one of the least painful vesicants. What especially characterizes this irritation is the large quantity of albumen which cantharidine causes to exude. Notable differences might be shown between the characters of this vesiculation and that of other phlyctenæ, seen in disease or produced by other agents.

The irritant action exercised by cantharidine upon the vascular layer of the skin has been utilized by M. Laboulbène for the destruction of maternal nævi. The modifications resulting from the direct action on the deeper portions of the skin are such that the nævus disappears without leaving other traces than a thin cicatrix. It is incontestible that under any other form, cantharidine only acting superficially, would not give the same result.

Society Reports.

ARTICLE VII.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY. Fourth Meeting, January 31st, 1879. T. D. FITCH, M.D., in the chair.

Dr. E. C. Dudley read a paper on Lacerations of the Cervix Uteri (published in the March number of the JOURNAL AND EXAMINER).

DISCUSSION.

DR. JACKSON: I freely indorse all that has been urged as to the frequency and pathological importance of the lesion under consideration. As an illustration of the grave symptoms it is capable of producing, I may mention the case of a lady who was sent to the Woman's Hospital of the State of Illinois from Iowa some three years ago. The injury was the result of parturition attended by the birth of an unusually large child. She had a slow and imperfect recovery; and, although able to resume her household duties after a few weeks, she soon found herself suffering so greatly that she took to the bed, and was wholly bedridden for more than two years. She was brought on a bed to the hospital.

On examination, I found a bilateral laceration of the uterine cervix extending on each side to the vaginal junction. The separated lips were rolled outwards, and the thickened, everted mucous lining was studded with follicular cysts and bled upon the least pressure. Her general health seemed completely broken down.

After suitable preparation, the operation of restoring the parts was successfully performed. She rapidly regained her health, and, after a few months, returned to her home, where she was a subject of wonder to her friends.

I have operated 19 times for this malady, with this result: One case was followed by a rather severe attack of pelvic cellulitis, but the patient recovered and the operation succeeded; in another case there was hæmorrhage requiring the vaginal tampon; in three cases the parts failed to unite, in two completely, in one union was partial. In two of these a second operation was successful; the third declined further treatment.

My mode of operation differs in some details from that of Emmet, as given by himself and by the essayist. I do not make use of Sims' speculum for exposing the parts, nor of his little hook for steadying them. I place the patient recumbent on a table, and after etherization, she is drawn down so far that the hips project several inches beyond it. She is now put in the lithotomy position, and this retractor, which I have shown you, and which is a simple modification of that devised by Sims for vesico-vaginal fistula, is introduced and the perineum drawn strongly downward and held by one of the assistants. In this position, and by this means, the uterus falls naturally *towards* the vulva, and not *from* it, as it does in the position recommended by Sims.

Again, in order to curtail the movements of the cervix, I am in the habit of passing a stout silk ligature through both lips of the cervix at a point which marks the center of the os. The two ends of this can be held by an assistant quite out of the way of the operator. To steady the lips while they are being pared, and while the needles are being passed, I use this double tenaculum, which has four times as much holding power as Sims' hook. Indeed, I have found this latter instrument quite insufficient to steady the parts while the needles are being passed through the dense walls of the cervix. I pare the surfaces which are to be united liberally, and prefer for the purpose those scissors known as Byford's. I use thick round needles, such as are employed for the closure of vesico-vaginal fistula, and silver wire for the sutures.

Instead of removing the sutures at the end of the week, as recommended by Emmet, I am in the habit of permitting them to remain 9 or 10 days.

Since I have adopted these changes, I have been enabled to

perform the operation with much more facility, and in much shorter time than before.

DR. BYFORD read a letter from Dr. Newman, of Denver, on the subject, which may be found in the present number under the head of correspondence.

DR. SAWYER thought the profession were less likely to err in overlooking the lesion in question than in attributing too great a rôle to the accident as a cause of real discomfort and injury. He instanced a case of a lady whom he had examined recently for the purpose of finding out if she was pregnant, and was surprised to find a marked extropion of the cervix uteri. Upon inquiry, there were absolutely no subjective symptoms of the injury, though three years had elapsed since her last pregnancy.

DR. JONES mentioned the rarity of laceration in his own obstetric practice, and the entire immunity from consequent inconvenience in a recent and pronounced case.

He also called attention to certain questions of diagnosis depending upon the direction in which the long axis of the cervical ellipse might lie, and the doubt whether a true follicular degeneration of the *external* cervix might not sometimes occur, determining a less value to the sign when present.

ARTICLE VIII.

5th Meeting, Feb. 28, 1879.

Dr. Nelson read a paper on Subinvolution of the Uterus, published in the present number of the JOURNAL AND EXAMINER.

DR. JONES (speaking 5th) said that his own views had been anticipated by previous speakers.

He could not agree with Dr. Goodell in regard to post-parturient recumbency, and regarded subinvolution as a common condition in females of the lower ranks, due to early rising, and producing in them, as in the more refined, a variety of uterine ailments.

But here the likeness ceased, and differences appeared in the succedanea, due to the exalted nervous susceptibilities found in

the latter class. This fact suggested remedial means well known to neuropathologists, i. e., the cultivation of *normal* muscular irritability as a cure for *morbid* irritability of the nervous system.

He had had the best results from the hot water douche, properly applied by Emmet's system, and from the use of ergot.

DR. EARLE gave the history of a case of subinvolution with prolapse and considerable hyperplasia, in which the patient could not, from a variety of causes, present herself for continuous or systematic treatment. The womb measured six inches and was prolapsed so that it made its appearance between the labia. The patient's occupation required constant standing, and the pain was very severe. She was fitted with a Hornby's pessary, and did not report to the doctor for nearly one year. The pessary had been worn all this time with complete relief from all pain, and the uterus now measured 3½ inches. The instrument was repaired and re-adjusted, and the patient told to report again if it caused irritation, or if she did not receive the same relief as before. He had not heard from her since, and supposed her cured.

ARTICLE IX.

CHICAGO MEDICAL SOCIETY. Reported by R. Park, M.D. Meeting at the Grand Pacific Hotel, March 3d, 1879. E. Ingals, M.D., in the chair.

The committee appointed at the last meeting to witness the demonstrations by Dr. Ephraim Cutter of specific spores in the blood of phthisical and syphilitic patients made their report. The committee thought that the demonstrations failed to establish Dr. Cutter's theories.

DR. D. W. GRAHAM presented the larynx of a patient who had died in a paroxysm of dyspnœa, with the following history:

Flora L., eight years of age, of English parentage, a decided blonde, of anæmic appearance. She has always had fair general health.

There is evidence of syphilitic taint on the paternal side of the family.

About four years ago I removed a large warty mass from the anus of a younger brother of the patient, which presented all the characteristics of the ordinary venereal wart. With these exceptions, the family history is good.

Three years ago the patient became hoarse, and the power of phonation gradually disappeared, leaving only a faint whisper. There was no dyspnœa at any time, except two paroxysms, of short duration, the one which terminated fatally and one a week previous.

On examining the specimen, we find the mucous membrane of the upper vocal cords, the ventricles, the true vocal cords, and of the inferior cavity as low down as the cricoid cartilage, covered with a warty looking excrescence, best developed, however, on the true vocal cords. The lower left border of the patch is slightly ulcerated and purulent.

After microscopical examination, Dr. I. N. Danforth pronounces the growth papilloma.

This patient has been under my observation at intervals for over a year and a half. The last time I saw her was in November last. I prescribed iodide of potassium and tonics from the first, which were taken very irregularly.

The diagnosis, although suspected, was never made. Repeated efforts and appointments for examination with the laryngoscope were made, but failure of the parents to keep the appointments caused me to lose interest in the case.

With the patient well in hand, and the co-operation of the parents, there is no reason why this case should not have been accurately diagnosticated.

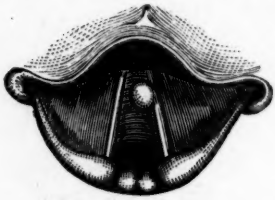
This accomplished, under the same conditions, the case could have been, I think, without doubt successfully treated; and I confess to some degree of self-reproach in the matter for not more fully appreciating the danger of sudden death, and for not more urgently persuading the parents into co-operation.

DR. E. FLETCHER INGALS reported two cases of laryngeal tumors, which he had recently removed.

Case 1.—Fibrous tumor on the left vocal cord; partial evulsion; cure.

Miss D. H., æt. 23, seamstress, applied at the Central Free

Dispensary, on account of hoarseness and occasional pain in swallowing. Upon examination with the laryngoscope, I found the larynx considerably congested, the vocal cords swollen and



congested, and a small, slightly pedunculated tumor growing from the under surface of the left vocal cord near its anterior extremity. The application of astringent powders soon removed the swelling of the vocal cord, and seemed to cause slight diminution in the size of the tumor. The larynx was very sensitive and intolerant of instruments.

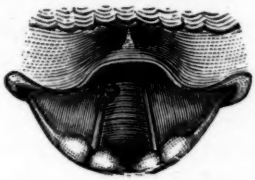
In October, 1877, the hoarseness had existed ten or eleven months; all acute inflammatory symptoms had subsided but the tumor still remained. After frequent attempts to seize the tumor with McKenzie's tube forceps, with blades opening antero-posteriorly, and failure to pass the blades between the vocal cords on account of the nearness of the tumor to the anterior commissure, I determined to seize that portion of the tumor (about two-thirds) which rose above the vocal cords. Turning the blades so that they opened laterally, I seized the tumor, crushing it firmly, and bringing away a portion of its mucous covering. Three days later the tumor had disappeared, but there was a prominence at its original seat, due to congestion and swelling of the cord. Ten days later the cord had resumed its normal appearance, and the voice was completely restored.

Case 2.—Fibro-cellular tumor on the right vocal cord, with partial aphonia; evulsion; cure.

Mrs. S., æt., 20. Formerly a teacher and elocutionist. Has been troubled for fifteen month with hoarseness, which seemed to have its origin in a common cold. Complained also of occasional dull pains in the larynx. The patient was treated for several months with gargles, inhalations, etc., and latterly has been treated, by a prominent homœopathic physician of this city, for

chronic laryngitis, with electricity, the poles being applied externally over the larynx.

Upon examination, I found a small tumor growing from the under surface of the right vocal cord, and situated about three millimeters from its anterior extremity. The tumor, as repre-



sented in the cut measured about six millimeters at its base and three at its apex.

During ordinary respiration the epiglottis hung so far backward that it was impossible to see more than a small portion of the posterior part of the glottis, but while the patient phonated a high pitched *a*, the epiglottis was raised and about half of the tumor projected above the vocal cord. In this case, also, I found it impossible to grasp the tumor with the blade of the forceps opening antero-posteriorly.

The position of the epiglottis rendered it impossible to pass the forceps into the larynx during ordinary respiration, and even during deep respirations the end of the forceps could not be carried far enough forward to reach the tumor without firm pressure by the instrument on the epiglottis, which would produce immediate closure of the larynx.

Accordingly, I was obliged to grasp the tumor during phonation, by which means I succeeded in removing the greater portion of it. The tumor when removed was much reduced in size, its semi-fluid contents having been forced out by the forceps.

Five days after the operation there was no trace of the tumor, though the cord was somewhat congested and swollen. Six days later nearly all congestion had disappeared, and the voice seemed normal, though the patient's mother thought it still a trifle husky. A few days later the patient assured me that the voice was perfect.

DR. F. H. DAVIS presented to the society the results of his

observation and study in the adpatation of local treatment to pulmonary diseases.

The chief obstacle encountered was in the lack of tolerance of the deeper air passages to local medication. The admixture of any medicament, either in gaseous, liquid or solid form with the inspired air, was immediately resented by the lungs in an involuntary, spasmodic cough, or attempt at rejection of the irritant material.

For this reason the various gases and vapor, or spray treatments, which had been from time to time put forward, had invariably disappointed the high hopes theoretically entertained for them, and had mostly fallen into disuse.

The author believes however, that in a certain limited range of pulmonary diseases a properly adopted local treatment would insure results not obtainable by any other form of treatment.

In acute inflammations of the air passages, moist or steam inhalations were considered to be contra-indicated on account of their tendency to increase the sub-mucous infiltration and œdematous swelling. In chronic, suppurative bronchitis, the inhalation of air charged with steam and carbolic acid vapor would readily check the excessive expectoration,—the addition of an anodyne, as camph. tincture of opium, would further lessen the irritative cough. The same result could, however, be perhaps as certainly and as speedily reached by the ordinary internal treatment.

The class of cases where local inhalations were chiefly of value, were those presenting the symptoms of incipient tuberculosis, or those approaching the second or suppurative stage, and also in cases of pneumonic inflammation tending, on account of the lack of recuperative power in the system, to take on a degenerative suppurative action to end in inflammatory phthisis.

In all of these cases it was of the utmost importance to conserve all the power and strength of the digestive organs for the building up and support of the system by food, nutritive tonics, etc., and the less these organs were taxed with ordinary medicines—anodynes, expectorants and the usual cough mixtures, the better for the patient.

The inhalation of air charged with warm steam and the vapor

of paregoric with the addition, in incipient tuberculosis, of some one of the balsamic preparations, as the oil of Scotch pine or the oil of English juniper, was recommended. If suppurative action had commenced, carbolic acid was substituted for the balsam.

The following formulas were given by the author.

℞ Oil Scotch pine ..... 5 | 0
Tr. opii. camph..... ..... 100 | 0

Sig.—1 teaspoonful to be added to ½ pint of boiling water, and the vapor inhaled for five minutes two or three times a day or oftener.

℞ Acid. carbolic. cryst..... 2 | 0
Tr. opii. camph..... 100 | 0

Sig.—Use the same as above

A tin inhaler which was exhibited was claimed to possess the following advantages: Large tubes (¾ inch) which permitted free inhalation without suction; valves so arranged as to enable the patient to expire slowly and against a certain amount of pressure which exerted an expansive effect upon the lungs and held the inhaled vapor longer in contact with the air passages. Lastly and chiefly, cheapness—the inhalers being sold to patients at seventy-five cents each. These inhalers are on sale by D. R. Dyche & Co., State and Randolph Sts., Chicago.

These inhalers on first being used created some reflex irritative cough, but this was quickly subdued by the anodyne effect of the opiate, and combined with the stimulant effect of the balsams or the disinfecting influence of the carbolic acid they would be found to accomplish most gratifying and satisfactory results in a class of cases otherwise unmanageable.

ARTICLE X.

CHICAGO MEDICAL SOCIETY. Reported by R. PARK, M.D.

Meeting, March 17th. Dr. Ingals in the chair.

Prof. E. L. Holmes read a paper on "Atropine, Duboisine, Eserine, Pilocarpine and Muscarine," which will be found under the original communications of this number.

In the discussion which followed, Dr. F. C. Hotz remarked that since the reading of his paper on anomalous effects of atropine, he had observed several cases in which the intra-ocular tension was greatly diminished by the prolonged use of atropine. In one case the eye was exceedingly sensitive to atropine, but tolerated the drug after morphine was added to it. It was a case of acute iritis of the right eye of a woman, aged thirty-one years, who consulted the doctor in the middle of December. The inflammation had lasted three weeks, and consequently there were several posterior synechiæ; the iris was much discolored, a very intense peri-corneal injection, and great pain in and about the eye; V=fingers across the room, tension normal. After one week the patient reported that the two preceding days the atropine had caused her much pain; and the eye which had been improving at first, was again more inflamed, the pupil more contracted. Morphine was added to the solution of atropine, and under this medicine the eye rapidly recovered, so that a few days after New Year's it was quite well and had perfect sight. But, at the end of January, patient returned with the eye worse than ever. It was very red and painful, but the pupil was of medium size, and regular. The sight, however, was again reduced to the counting of fingers across the room, and the tension of the globe was exceedingly diminished, and it was as soft as a partially atrophied eyeball. Patient had been using atropine all through January. It was discontinued at once; a mere placebo was given (an ointment with vaseline to rub in the forehead) and after one week the eye was well and its sight perfectly restored.

In regard to pilocarpine and eserine, Dr. H. thought that pilocarpine would probably be the myotic of the future, because it is more stable in solution than eserine; furthermore, it produces less irritation, and probably it will be less expensive. "Both remedies are still on trial, and nothing definite can be said about the indications for their use. But if some writers recommend them in cases of hypopyon, it is difficult to harmonize their advice with the facts that all observers consider pilocarpine or eserine strictly contra-indicated in affections of the iris, and that in hypopyon the iris is almost always implicated."

Pilocarpine and eserine are considered very efficient in reduc-

ing the tension of the eye-ball. But, in the following case, pilocarpine seemed to have an opposite effect. A sailor came to the Illinois Eye and Ear Infirmary a few weeks ago with a large central ulcer of the right cornea. It came on three months ago, after an eruption of herpes zoster frontalis and nasalis. Atropine has been used all the time; pupil was moderately dilated, eye-ball very red, painful and extremely soft. Pilocarpine was used in lieu of atropine with a very good result; the pain has left the eye, the inflammatory symptoms have pretty nearly disappeared, and the tension of the globe has decidedly improved, though it is still a little under the normal standard.

Dr. Lyman Ware wanted to ask whether the use of pilocarpine would do away with the necessity for iridectomy in cases of glaucoma? He had been treating a sub-acute case of this disease with it, but sufficient length of time had not elapsed to prove its efficacy.

Dr. Holmes closed the discussion by saying that the only glaucomatous case in which he had used the drug was one complicated by staphylomatous cornea, and, although it seemed to work well, he was not yet willing to commit himself on this point. In acute cases he thought that very few would be willing to wait long enough to test it, fearing disastrous result from the delay.

He apprehended danger in the future from the use of these drugs in unskillful hands, since very few were able to diagnose iritis in its earliest incipiency, and if an inflamed iris should be thus contracted down by their use, adhesions might form and irreparable injury be the result.

Dr. R. G. Bogue then reported a case of intra-laryngeal tumor in the left aryteno-epiglottic fold occluding the glottic opening, the case being complicated by a chronic pharyngitis and ulcerated epiglottis. After the use of local astringents and general tonics, he performed tracheotomy, leaving the tube *in situ* some nine months. During this time and under the internal use of potassic bromide, the tumor became smaller, and now, after three years, only a scar remains to mark its site. In discussing its nature he said that if it were considered of a specific character, of which there were no constitutional evidences, it would indicate that the bromide was as efficacious as the iodide was reputed to be.

Dr. Bogue also reported the case of a woman aged 24 years, in the puerperal state, who was suddenly seized with acute pain in the calf of one leg. After a few days this was followed by discoloration of the foot, and this by spontaneous gangrene. In spite of all treatment this extended, and finally, a line of demarcation having formed, he amputated through the knee joint successfully. Subsequent dissection of the amputated portion revealed extensive occlusion of the venous channels from a phlegmasia of the *deep* veins, which was a very rare occurence. The patient's recovery was delayed by a mild phlegmasia alba dolens of the other leg. He exhibited sections of the occluded popliteal veins, of which there were two.

Dr. D. W. Graham exhibited a femur, removed from a subject supplied for his lecture course, which gave evidence of an oblique fracture having at some time been suffered involving the upper third of the shaft; the upper fragment having been tilted forwards and outwards. The bone, on comparison with its fellow showed an inch of shortening, one-third of which was between the two trochanters, thus indicating that the lesser trochanter formed a part of the lower fragment. The peculiar obliquity and locality of the fracture made the specimen an interesting and unique one.

Dr. Roswell Park exhibited a specimen, also removed from a dissecting room subject, of an elbow joint which had been the seat of some injury which he conceived to have been of the following nature: An oblique fracture of the upper one-fourth of the shaft of the ulna, with dislocation forwards of the head of the radius. The result of the injury was deformity of the ulna near its olecranon process from gliding and rotation of the fragments, and a new socket for the head of the radius on the external condyle of the humerus, an inch above its proper site on the ulna, where it had formed strong ligamentous attachments. The head of the bone was much larger than normal, evidently from irritation, and those parts of the condyle and of the radial head which were in contact, were cburnated and denuded. In the outer part of the orbicular ligament was what seemed to be a calcified fragment of periosteum, which had probably been loosened at the time of the injury.

After inspection, all those present agreed in accepting the above explanation as best accounting for the appearances of the specimen.

The society then endorsed a resolution passed by the West Chicago Society recommending the State Board of Health to secure legislation providing for compensation of persons who make returns of births and deaths, as now required by law; after which it adjourned.

RESEARCHES ON THE TREE WHICH PRODUCES "GOA" POWDER.—Dr. Da Silva Lima. "The tree which yields the Araroba or Goa powder is known in the districts where this industry flourishes under the name *Angelim amargosa* ('bitter angelim'). The word *angelim* is not now understood. The tree belongs to the nat. ord. Leguminosæ, and the appellation 'bitter' arises from the fact that the ligneous portion resembles good cinchona in flavor and bitterness. It is found in company with another tree belonging probably to the same genus, namely, *Andira anthelmintica* Benth., which has anthelmintic properties. There is also an *angelim doce* ('sweet angelim,' *Andira vermifuga*) and an *Angelim pedra* (*Andira spectabilis*)."

The araroba tree occurs abundantly in the forests of Camamu, Igrapiuna, Santarem, Taperoa and Valença, of the province of Bahia. It attains a very large size, one to two meters in diameter, and twenty to thirty meters in height.

The Goa powder is contained in more or less narrow fissures and chinks in the ligneous portion, running mostly through the whole length of the trunk, and becoming narrower above. It is customary to cut down the tree, to saw it into sections, and then to split the blocks open in the direction of the fissures, when the powder is readily obtained. There is scarcely any doubt that the original tree is either an *Andira* or a *Cœsalpinia.—L' Union Pharmaceutique.*

Foreign Correspondence.

ARTICLE XI.

MISCELLANEOUS SURGICAL NOTES FROM BERLIN.

As a place for the study of surgery, and the witnessing of surgical operations, Berlin is undoubtedly the very best point in all Europe, and hence probably the best in the world.

Other cities have as much or more surgical material, but it is generally, as here in London, so divided between different hospitals and different operators, that it is impossible for one to witness it all, or to be benefited by it, to such a degree as at "Langenbeck's Clinic" in the German capital. For from two to four hours each day, for six days in the week, you can witness here every variety of surgical operation, from the opening of an abcess to those the most grave known to the domain of surgery.

To-day Prof. Langenbeck is to surgery in Prussia, what no other man is to this branch of medicine in any other country.

Although he has introduced and is really the father of many of the great operations that he performs, he is a man without a hobby, and never speaks of any procedure as being an invention of his own. While Péan, Gosselin and Verneuil seldom quote anything but French authority, and Bryant, Lister and Paget are partial to British authors, Langenbeck is as cosmopolitan in the sources from which he draws his knowledge of the branch that he teaches, as the universe itself.

As a didactic teacher, he never would have been a success in America, where a certain eloquence of delivery is considered so essential in the lecture-room. In lecturing, he often hesitates, and will sometimes stop for several seconds between the phrases of his sentences. In treating of any surgical procedure of impor-

tance, he first gives the views and teachings of others, and then compares the same with his own experience; which, taking the whole field of surgery together, is probably the most varied and extensive of any man's now living. While Péan, of Paris, does only the most important part of his surgery, leaving the closing and dressing of wounds to his assistants, Langenbeck attends to every detail himself, ties every artery and puts in every suture.

With the use of the antiseptic spray, he says that *time* has ceased to be an essential factor in the performance of most surgical operations.

Hence he does his work in the most deliberate manner; without dash and without bustle, he executes his task with that steady and matter-of-fact composure with which a mechanic would use his tools in the pursuit of a trade to which he had devoted his entire life. Only in a single instance do I remember to have seen him show the least agitation, even in the greatest emergency.

A young man came to the "Clinic" who had a large fibroid growth situated in and attached to the superior and posterior aspect of the nares. Prof. Langenbeck first thought, on examination of the case, that it would be necessary to resect a portion of the superior maxillary bone in order to reach the mass and remove it. But finding, on further examination, that he could reach it by way of the pharynx, he laid the patient on his back on the operating table, and seizing the growth with a strong pair of forceps, with great force he twisted it off. So immense was the hæmorrhage that followed the operation, that the patient lost one liter of blood in less time than that in which the reader can read two lines across the pages of this journal. The old man stood amazed and cried out, "Good Lord, what shall I do? I think I shall have to ligate the carotids;" but with a presence of mind that did not even now desert him, he placed both thumbs on these vessels, and while he made firm pressure he had the man raised to the upright position, and by continuing the pressure the bleeding soon ceased. The doctor said that his first impression was, on seeing this great flow of blood, that the tumor was attached to the internal carotid, and that in tearing it away he had torn through the coats of this vessel.

The patient made a slow but perfect recovery.

Report says that this year will end the labors of this great man as a teacher, as he proposes at the end of the next Semester to resign his Professorship in the University of Berlin.

Prof. Volkmann of Halle, an eloquent teacher, and a man in the prime of life, is likely to take his place; while Dr. Schede, Surgical Director of the City Hospital of Berlin, and a man, by the way, who excels Lister himself in carrying out the principles of antiseptic surgery, will go as Professor of Surgery to Halle.

To select from the immense amount of material that I have had access to in this clinic, such as would be of most interest to the reader, is a task of no little perplexity; but I shall follow the same rule in my selections that has heretofore governed me, and that is, to give those cases the preference that are most likely to be met with and require management in ordinary practice.

AMPUTATION OF THE FEMUR.

A man aged 36 years, suffering from a malignant disease of the lower end of the femur, was brought into the ampitheater, and while the assstants were administering chloroform to the patient, and making other necessary arrangements for the amputation, Prof. Langenbeck made the following general remarks on the subject:

"Where it can be done, I make *side* flaps, instead of antero-posterior ones, as is generally done. I do this, first, because a better drainage can be effected after the operation, and second, because I believe any resulting cicatrix is more likely to be situated at a point that will render it less liable to be irritated by the friction connected with the movements of the stump.

"Again, I make my flaps *entirely* of skin and its immediately adjoining tissues. I want no muscular tissue overlapping the end of the bone. If you have a long muscular flap, it is sure to either slough away or gradually become absorbed. If it should slough, it immediately complicates your case by adding to the dangers from septicæmia."

When he had made his skin flaps he then made a section of the periosteum, extending half way around the shaft of the bone, and six centimeters in length. Having peeled this carefully back, he

had a perfect covering for the end of the bone, after the latter was sawn off. He says, that since he has adopted this mode of procedure, he has never had a single case of secondary disease, such as caries or necrosis, following his amputations. When he had sawn off the femur, and brought the skin over the end of the stump, lo! his flaps were so short that they would not come together without considerable tension. He remarked: "As you see, gentlemen, the end of my bone is either too long, or my flaps are too short, and, as I cannot lengthen the latter, I shall have to shorten the former;" and without another word of explanation he proceeded to saw off another six centimeters from the end of his stump.

Before he closed the wound, he applied eighteen ligatures, all of which, except the one to the main branch of the femoral artery, were of carbolized catgut. These ligatures of course were all cut short and left to be absorbed; and I have never seen him leave the long ends of ligatures out of a wound with a view to their future removal. A drainage tube was introduced into the inferior and superior border of the stump, and the whole was sewed together in the most painstaking manner. The stump was dressed with Lister's antiseptic dressing, the whole operation being done under the spray. The operation lasted one hour and ten minutes. In contrast with this time, I have seen Prof. James R. Wood, of New York, do this operation complete in five minutes, making his flaps and sawing off the bone in forty-five seconds.

The result of this operation was most satisfactory indeed. The whole wound healed by first intention, and the patient never had a temperature above 37.5, and never suffered any considerable amount of pain.

In speaking of the rapid recovery of this case, Prof. Langenbeck said that he attributed it mainly to the painstaking manner in which he had arrested *every vestige* of hæmorrhage before closing the wound. He believed that in the vast majority of cases where a constitutional reaction followed surgical operations of this kind, and which we had formerly been taught to look upon as having its origin in an inflammatory reaction, was in fact of a septic character, and that a decomposed blood clot situated at the

extremities of open blood vessels, was the very best possible condition for generating such a process.

PROLAPSUS ANI.

A boy aged six years was brought into the clinic, suffering from this affection. It had troubled him for two years, but until within the last month the gut only came down at the time of the stools. For the last four weeks it had been down constantly, and neither the mother or her family physician had been able to replace it. In connection with the case Prof. Langenbeck said: "In this disease I have been able to cure *every case* in which I have instituted the treatment I shall adopt in this one, where the the patient has been above three years of age.

"Why I have not been equally successful in those of more tender years, I cannot tell, but am disposed to attribute my failures to the fact of younger children being less manageable, and their pressing down efforts when they cry."

His treatment consists in the injection of ergotine into the cellular tissue beside the rectum. He passes the hypodermic syringe parallel with the gut to the depth of about three centimeters, and injects about 20 minims of the solution into each point, usually making the injection at two or three places around the sphincter.

As the mucous membrane of the prolapsed gut in this case was very relaxed and superabundant, he made three parallel incisions through it, about four centimeters in length, with the thermocautery, with a view of producing a cicatricial growth that would contract the parts when it healed. This last procedure he did not consider essential to the treatment, but it would probably hasten the cure. The gut was now replaced, and the boy put to bed, and the cure was complete, as the bowel never again came down.

I have been most highly pleased to witness Prof. Langenbeck's operations upon the uterus, and in listening to his lectures upon this subject, not only on account of his wide range of personal experience, but also on account of the fact that I look upon him as a man who is the least influenced by any special hobby of any man that I have ever seen operate on that organ.

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UTERINE POLYPI AND FIBROIDS.

I saw him operate on a woman for the removal of a uterine fibroid polypus that had descended into the vagina and filled this organ so completely that the evacuation of both the rectum and bladder was completely obstructed.

The growth was so large that he was unable to pass the écraseur over the entire mass to its cervical attachment, and hence he had to pass the chain of the instrument around its lower segment, and remove it in three separate portions.

The last was so large that he had to extract it with a pair of obstetrical forceps. He said: "Whether these growths be solid, soft or cystic, there are only three modes of removing them that I recognize as proper to adopt, and these are, the knife or scissors, the écraseur and the galvano-cautery. When they are attached high up in the uterus, I do not like the galvano-cautery, for the reason that you can never be really certain what you are burning, and you may destroy tissues that will lead to disastrous consequences."

The use of the ligature for the removal of these foreign bodies he especially condemned. In the early years of his professional life, he had seen two patients die of septicæmia following the removal of a uterine polypus in this manner.

We must remember, in all our operations upon the uterus, that although we have to do with an organ that will tolerate a good deal of mechanical violence, that we have also to do with a mucous surface that will the most rapidly absorb effete matter of any tissue in the entire body; and that when a polypus is ligated it soon becomes a putrid mass, from which the whole economy may become rapidly contaminated. The twisting off of polypi he also considers a bad practice, and has seen at least one case where the extensive laceration of the mucous surface of the womb attending the operation resulted in a metritis from which the patient died.

Prof. Schröder had in his wards at the Charité this winter some interesting cases to illustrate his management of different forms of uterine fibroids. In our treatment of these cases, he says, we should remember one fundamental rule, which is, that in the history of every such case there usually comes a time when

the morbid growth will cease to increase in size, begin perhaps to undergo a retrograde metamorphosis, and become in time entirely innoxious as far as the well-being of our patient is concerned. Directly opposed to this are the facts connected with the history of most cases of ovarian cysts. Their tendency is ever to increase in size, and their removal will sooner or later be imperatively demanded. Keeping these facts in view, we seize upon the most appropriate time for our operative interference. In the management of a case of uterine fibroid, he says, investigate your case accurately as to this fact. Is its attachment situated upon the lining membrane of the *body* of the womb, or upon the *cervix* uteri. If it have its origin from the body of the womb, you are to consider it as a *noli me tangere*, unless it be the direct cause of symptoms that are likely to prove dangerous to the life of the woman. On the other hand, if it spring from the cervix uteri, you may operate on it in almost any way with comparative safety.

To arrest the hæmorrhages that accompany these cases, he swabs out the inner surface of the womb with either the tincture of iodine or a solution of one of the astringent salts of iron.

A question in which I have been greatly interested, and upon which I have interviewed everybody, is the value of the hypodermic injection of ergotine in the treatment of uterine fibroids.

Prof. Schröder says that he has often seen cases greatly benefited by this treatment, but has never seen a case entirely cured by it. By its use the hæmorrhage will often cease, and the tumor become greatly lessened in size. To test the remedy he says you must use at least one hundred injections. He makes them into the cellular tissue of the abdominal walls, and repeats them as often as every alternate day. As so protracted a use of an agent that is often very painful, taxes to the utmost the patience of both physician and patient, few carry it out thoroughly.

Braun, of Vienna, makes these injections into the outer aspect of the thigh, where they are better borne. He uses also Bourbellon's ergotine, and none other, as he says you never have an abscess follow its use. Its name, I believe, is derived from a Swiss chemist who manufactures it.

Dr. Routh, of Dorset House Hospital for Women and Children, in London, is the greatest enthusiast of any I have met in Europe as regards the efficacy of his treatment of intra-uterine fibroids. His plan is to first puncture the tumor by passing a sharp pointed instrument into it about the size of a number six English catheter. The depth to which he makes this puncture will depend upon the size of the tumor, but will usually be to about one-half of the thickness of the growth. After making his puncture, he introduces into the hole thus made a wire of nearly the same size, heated to a red heat. He claims that in this way you can excite an inflammatory change in the body of the fibroid that will lead to its absorption, and that too without any of the dangers of a septic process following the procedure, which would be likely to occur if you attempted to accomplish the same object in any other way. He says that he has never failed to benefit a case that he has treated in this manner.

He was surprised when I told him that I had seen Prof. Péan, of Paris, carry out the same idea in the management of some cases at the St. Louis.

AMPUTATION OF THE CERVIX UTERI.

Of the various modes of doing this operation, Prof. Langenbeck prefers the knife or the scissors. The écraseur, he says, should *never* be used for this purpose. He relates a case that occured in his clinic, when Prof. Bilroth was his assistant, in which, although he applied the instrument with great care, and kept his finger on the chain during the whole operation, Prof. B. tightening the screw, a portion of the bladder was included in the incision, and the patient died two days later of peritonitis. The objection that Prof. Langenbeck has to the galvano-cautery in this operation is that you can never be positively sure as to *just* how much tissue you are removing.

On the other hand, since I have been in London I have seen Prof. Barnes amputate the cervix twice with the écraseur. He used the instrument without a speculum, being guided wholly by the index finger of each hand, which he kept in contact with the chain.

After the cervix is removed, he applies the thermo-cautery, to

arrest any hæmorrhage that may exist. This, he tells me, is his *uniform* mode of doing this operation, and that he is perfectly satisfied with his results. Prof. Barnes brought out a patient and laid her on the operating table, telling me as he did so, that he was going to show me the American operation (Emmet's).

But on examining the cervix, and seeing it very red and congested, he concluded that he would wait a few days, until the congestion in the parts subsided. In fact, he feared the hæmorrhage that would follow. I could but contrast his timidity with the confidence with which some German operators would have attacked these parts with the knife, without the least fear or hesitation.

I have seen the amputation of the cervix done with scalpel about forty times during my stay in Berlin, and not in a single instance have I seen any serious trouble in arresting the bleeding. Dr. A. Martin, of this city, read a paper last year before the gynæcological section of the German Medical Society, on "The Therapeutics of Chronic Metritis," in which, after going on to state that as all medications, both local and constitutional, had proved of no avail in the management of this disease, he had been induced to resort to an operative procedure for its cure, which operation consisted in an amputation of the cervix uteri.

At that date (August last) he had done the operation 109 times. Of these patients, 72 suffered from a simple chronic metritis, one-half of which number he had had under observation and treatment for many months without the least improvement in their condition. Twenty-six were performed for a cancerous condition of the cervix, and eight for a local hypertrophia of one or both lips of the neck of the womb. Of these cases, only two died as a direct result of the operation. One of these was very anæmic from loss of blood before the operation, and died of septicæmia soon after. The other proved fatal from the supervention of typhoid fever.

His mode of doing this operation is to cut away a portion somewhat funnel-shaped, the base below and the apex above, of from 3 to 5 centimeters in length, depending upon the length of the uterus, as measured by the sound before he operates.

I have followed Dr. Martin carefully for nearly four months,

and have seen him and assisted him at this operation more than thirty times; and while I am perfectly sure that no écraseur nor galvano-cautery can do this operation so well as does his knife, I am sorry to be compelled to believe that, like some other of our noted gynæcologists, he is bent on doing "*his*" operation as often as possible, and so submits many a poor woman to this treatment, who might be relieved by a more simple procedure.

Unfortunately, like many another celebrated operator, he is inclined, I fear, to keep in the background as much as possible the accidents that follow his treatment.

I saw a woman in the service of another gynæcologist of Berlin, operated on for complete occlusion of the os uteri and hæmatometra, that followed an amputation of the cervix by Dr. Martin.

When I related the case to Dr. M., he said that this patient was one of two who had had secondary hæmorrhage following the operation, and he attributed this bad result in her case to the extra stitches that he had had to put in, in order to stop the bleeding, as well as her having left his service and passed out from under his observation sooner than she should have done. Prof. Schröder's mode of amputating the cervix, and which Prof. Langenbeck recommends, is, in my mind, at once the most simple and easy of execution of any of the numerous modes of doing this operation that I have seen tried. Dr. Martin, however, objects to it because the resulting stump is somewhat flat, while when done after his plan (Dr. Martin's) the stump is conical in shape. Prof. Schröder's reply to this is, that nature has to re-shape the parts after any cutting procedure of this kind, and that in the end his operation leaves as natural a cervix as any other. To do this operation Prof. Schröder places his patient on her back, her thighs flexed upon the abdomen and the legs upon the thighs. (I have never seen a German operator place a woman in Sims' position).

A Simon's speculum is next introduced, and the perineum pressed well down. A Hegar's irrigator containing a 5 per cent. solution of carbolic acid is now made to throw a constant stream of this fluid upon the cervix uteri during the entire operation. In fact, Prof. Schröder claims to make this operation strictly

antiseptically, substituting the fluid carbolized solution for the spray. A pair of scissors are now introduced into the os uteri, and the os incised as high up as the vaginal insertion on each side. The cervix is thus divided into two flaps, and while an assistant pulls down upon and steadies the womb by means of a pair of forceps made fast to one flap, the surgeon seizes the other and amputates it rapidly with the knife, cutting, of course, from below upward, so that you have left after the amputation a somewhat long flap-shaped mucous membrane to cover the stump.

By means of a curved needle, armed with a heavy silk ligature, two sutures are now passed from the vaginal mucous surface of the stump into the os. These sutures are each placed 1 centimeter from the median line at their point of entry into the vaginal walls. They are now tied tightly, and serve to render the os uteri patulous, as well as to pull down and hold the womb firmly, while the other lip is being cut away in the same manner. From three to four stitches are next applied on each side of these central ones, and the operation is completed. The vagina is now tamponed well with salicylated cotton, which seals up the wound and makes the whole procedure antiseptic.

With the uterus thus firmly held, and with a needle curved to a semi-circle and armed with a silk thread, there is but little difficulty in passing a suture through the muscular walls of the uterine stump in such a manner that when it is tightly tied it will include any bleeding vessel and effectually arrest any hæmorrhage.

German operators do not use the silver wire for sutures, either for this operation or Emmet's, as they claim that the silk answers every purpose, and is much easier to apply and remove.

Prof. Langenbeck lays down one very emphatic rule as to the use of styptics to arrest hæmorrhage where operations have been done in the vagina, and where the probabilities are that the peritoneum has been encroached upon. *Never*, he says, use preparations of *iron* for this purpose. He relates several cases where he used a solution of iron, and after his patients died of peritonitis he found that the walls of the peritoneum had sloughed away from the effect of his styptic. He believes that even a moder-

ately strong solution of iron will cause a necrosis of any serous membrane to which it is applied.

Prof. Freund, late of Breslau, but now called to Strasburg to fill the place of Prof. Gusserow, appointed as Professor of Midwifery in the University of Berlin, spent a month in the latter city this winter. As the reader perhaps knows, Prof. Freund is the father of the revised method of extirpation of the entire uterus through the abdominal walls.

I saw him operate on a case for Dr. Schröder just before I left Berlin. The patient was alive four days after the operation, but her recovery was considered doubtful. I saw him begin another operation of the same kind for Dr. Martin, but after making his abdominal incision, he found the pelvic glands so invaded by cancerous infiltration that he would not attempt the removal of the uterus.

He closed up the wound, and Dr. Martin then performed his amputation of the cervix uteri as a palliatory expedient. This poor woman had a good deal of constitutional disturbance, but was convalescing the last time I saw her, ten days after the operation.

Prof. Freund has done this operation of the total extirpation of the womb 12 times and has had 7 recoveries, while in Dr. West's tabulated 25 cases there occurred 23 deaths.

The enucleation of the womb entire through the vaginal walls, of which a lately published case is reported by Prof. Lane (I believe) of San Francisco, Prof. Langenbeck considers an anatomical *impossibility*.

He says, that while you may with considerable facility separate the *cervical* portion of the womb from its attachment, that when you reach the *body* of that organ, you cannot separate its muscular tissues from its peritoneal coating without the greatest difficulty, even when you have the uterus removed from the body and dissect with the greatest care, and as an operative procedure upon the living body he does not think its accomplishment possible.

TRACHEOTOMY.

A child six years old was brought into Prof. Langenbeck's clinic, and being placed upon the table. He said:

"Gentlemen, you would scarcely imagine on looking at this little boy and seeing how little his respiration is embarrassed, that I am about to open his trachea."

The patient was suffering from dipththeria, and had twenty-four hours previously developed a croupy cough. Prof. L. laid it down as a rule, to which there should be no exception, that in the management of these cases that you should operate before signs of extreme dyspnœa and blood poisoning come on. Waiting will do no good, for with an almost absolute certainty tracheotomy will be necessary, and the longer you wait the less are your chances of success. The operation itself is not dangerous unless done when the patient is in extremis. Since 1870 he has done this operation 700 times in this clinic. In some years he has saved as high as 40 per cent. of his cases operated on, and in others only 10 per cent.

He was not able to explain why there should be this great difference in the mortality of his cases in different years; but one fact he did know, and that was that since he had given out word to the physicians of Berlin that they should send their diphtheritic patients earlier for this operation, that his success had been much better.

In the City hospital of Berlin diphtheritic patients are kept in a ward adjoining that devoted to the chronic diseases of women. On making one of my evening visits to this institution with Dr. Alberts, physician in charge, he showed me a boy ten years old who had just been brought in with this disease, and upon whom he proposed to perform the operation of tracheotomy if the case did not improve after one hour.

I administered the chloroform, and the doctor cut down through the skin and underlying fascia, and with great care separated, as he thought, the two lobes of the thyroid gland with the handle of his scalpel, and finally reaching what he thought to be the trachea, made an incision into it. No air escaped, though he pulled the edges of the wound open with a pair of forceps. The true condition of things now flashed over him in an instant. He had gone outside of and behind the trachea, and had opened into the œsophagus. After waiting a few moments and expressing his great horror at what he termed his *extreme stupidity*, he opened

the trachea and put in the tube. With even this mishap this case did well as far as the operation was concerned, though the patient died five days later from extension of the diphtheritic process into the bronchi. The boy was not given any nourishment by the mouth for 24 hours, but after that time he was given fluid nourishment, which passed into the stomach without hindrance.

W. S. CALDWELL.

LONDON, March 3d, 1879.

ARTICLE XII.

REPORT OF THE SOCIETY OF BIOLOGY. Meeting of February 1. President M. Paul Bert.

It has been demonstrated in physics that a body cannot be transparent except all its elements (i. e. physical) have the same *index* of refraction. M. Ranvier stated that this was also true of the cornea, composed as it is of divers histological elements. The speaker had investigated the physical conditions which destroy the transparency of the cornea. The cornea of a frog having been excised and fixed was exposed for 5 minutes to the vapors of osmic acid. Examination immediately after by the microscope, the cornea still remaining fixed, failed to reveal a single cell. If, however, the cornea had been plunged in aqueous humor previous to exposing it to the fumes of the osmic acid the corpuscles were at once apparent. From this double experiment the speaker concluded that the corpuscles of the *living* cornea are *invisible*. Under the influence of watery vapor the fibres of the connective tissue swell, thus diminishing their refractive power. Hence results a loss of transparency—due solely to the imbibition.

Alteration of the Anterior Roots in Saturnine Paralysis.—M. Déjerine said the authors of late years state that in cases of saturnine paralysis changes in the muscular nerves are constantly met with. (Lancereaux, Gombault, Westphal, Mayor, Friedlaender). This alteration, analogous to that observed in the peripheric end of a cut nerve (parenchymatous neuritis of some

authors) is the more marked, the more advanced as a lesion, the longer the duration of the paralysis and muscular atrophy. The same alterations are met with in the radial nerve, but these authors fail to state to what *height* they have found these alterations to extend along the course of the nerve. M. Vulpian, in a case of saturnine paralysis dead in his service, has clearly demonstrated alterations of a certain number of the anterior roots in the cervical region. In this case he very clearly demonstrated the existence of "interstitial neuritis" seated in a certain number of the nerve tubes, some of which were atrophied and reduced to their "sheath of Schwan." The case observed by Prof. Vulpian is the only one up to the present in which examination of the anterior roots has given positive results. M. Déjerine having had occasion to examine the nervous centers and muscles in five cases of saturnine paralysis of the extensors gave the results of his researches. These were examined in the recent condition—the intermuscular and radial nerves, together with the anterior roots—with the following results:

Alteration of Muscles.—Simple atrophy of the primitive fasiculi with multiplication of their nuclei, no trace of fatty degeneration.

Alteration of the Intermuscular Nerves.—Degenerative atrophy of the nerve tubes, granular degeneration of the myeline, multiplication of the nuclei of the protoplasm, destruction of the axis cylinder. This destruction of the nerve tubes is the direct cause of the duration of the paralysis, moreover, it does not affect all the tubes in the same degree; while some are scarcely changed others are reduced to their "sheath of Schwan," others being altered in all degress from the first-mentioned condition to the last. It is, however, rare to meet with a perfectly sound fiber in a preparation.

Alterations in the Radial Nerve.—These same alterations have been found in a certain number of fibers of this nerve in the greater part of its length, and in one case, where the conditions of the autopsy permitted—very near its point of emergence from the brachial plexus.

Alterations in the Anterior Roots.—Examination in the recent condition by treating with osmic acid and picro-carmine has been

made of the anterior roots of four of these cases. In two cases M. Déjerine has very clearly demonstrated the existence of very advanced alterations in a certain number of nerve tubes, alterations in all respects similar to those met with in the intermuscular and radial nerves. In one of these cases, and this is particularly interesting, the patient had paralysis on one side only—the side in which the alteration of the nerve-roots was observed, the other side being absolutely normal. In the three other cases examined by the same methods, the results were somewhat doubtful as to the alteration of nerve tubes, but they did not present the healthy appearance observed upon the sound side, yet it was impossible to establish any distinct alteration beyond a slight atrophy—not very pronounced. The speaker stated that he should examine the spinal cord in these cases and report at a subsequent meeting. M. Déjerine adding these two cases to that observed by Prof. Vulpian, and considering the clinical history of the affection and, moreover, the fact that it is generally bilateral, offered the hypothesis—under all reservations—that saturnine paralysis is probably of medullary origin, a hypothesis that subsequent researches would either confirm or refute, but which, in the actual state of the science, is the only one we have any rational warrant for, in view of the clinical history and anatomical lesions of this affection. Dr. Charcot observed that he had never found any well-marked changes in the spinal cord in cases of saturnine paralysis. M. Ranvier said he did not comprehend degenerative lesions of the nerves proceeding from the periphery to the center. In these cases of saturnine paralysis the examination of sections never showed him any marked lesion, indeed, so far as he could see, they presented very much the appearance of healthy nerves. M. Déjerine reminded those present of what occurred in stumps of amputations, as surgeons well knew there ensued in the cut nerve an interstitial neuritis, which ascended some centimeters along its length, and yet in these cases there were not (intrinsically) any symptoms of spinal irritation.

Contraction in Lesions of the Lateral Ventricles.—M. Cassy gave the results of his experiments upon dogs in the laboratory of Prof. Vulpian. He introduced into the lateral ventricles of a

dog (through the corpus callosum) crystals of nitrate of silver; thus producing superficial lesions of the ventricular walls, with slight effusion. These lesions developed little by little, have not given rise, in some carefully observed cases, to any contraction or any convulsive phenomena. Yet contraction is regarded as the rule in effusions into the lateral ventricles. M. Cassy then asks whether the contraction is not due to the pressure upon the neighboring parts of the ventricular walls, distended by the rapid effusion into these cavities, instead of being a phenomon of reflex action due to irritation of their walls by the pressure of the effused material as regarded by the authors.

In support of his hypothesis, the speaker has injected into the lateral ventricles coagulable liquids, boiled starch in one case, and liquified parafine in the other, and he had then seen a contraction intense and general, at the moment of rapid injection of a quantity of liquid relatively small. Without wishing to generalize unwarrantably, or magnify the importance of his observation, M. Cassy believed, in a general way, that the contraction observed in rapid effusions into the lateral ventricles was caused by pressure upon the neighboring parts. O. C. OLIVER.

HOTEL D'ORIENT, PARIS, Feb. 25, 1879.

ARTICLE XIII.

SOCIETY OF BIOLOGY. President, M. Paul Bert. Extracts from the transactions at the meeting of Feb. 8, 1879.

Mons. Mathias Duval, professor of histology in the faculty of medicine, stated that he preferred a mixture of collodion and alcohol for imbedding tissues of which it might be desired to make sections, instead of the "wax and oil" mixture so generally employed, which is opaque and prevents a clear view of the portion of tissue to be cut, while the former mixture is transparent, and has the additional advantage of a certain degree of elasticity very favorable for obtaining thin sections, of which a number of very fine ones were exhibited, chiefly of embryos.

M. Laborde communicated the results of his experiments on the effect of injections of milk into the veins. He found that the injection of 80 cubic centimeters of milk into the veins of a dog weighing 11 or 12 kilos. caused very rapid death, but repeated injections of 25 to 30 grams were easily borne. Almost immediately after the injection, milk globules were found in the general circulation, the larger always appearing last. Little by little the globules disappeared from the circulation, to accumulate in the "splanchnic organs." In those animals who died in from 20 to 40 hours, M. Laborde found ecchymoses in the lungs and mucous membrane of the stomach. In the centers of these hæmorrhagic spots, he found numerous white globules histologically identical with those of milk. Numerous capillary hæmorrhages were also found in different portions of the encephalon. M. Laborde has also experimented upon frogs, in which class of animals the injection of minute quantities of milk was made with an invariably fatal result. The injections were made into the lymph sacs of this latter animal.

The speaker stated that he considered it prudent to abstain from the injection of milk into the vascular system of man, as had been done by some physicians in the treatment of cholera, except in the so-to-speak desperate cases, under which circumstances alone he considered this bit of tentative practice justifiable. The speaker had been able to preserve a dog in whom fractional doses of milk had been injected into the veins, after a venesection, of 200 grams. If the dog should survive, he would be shown at the next meeting. The president stated that he had also experimented upon dogs by injections of milk into the veins, but the results were too inconstant to permit deductions of any practical avail in the treatment of man.

Dr. Brown-Séquard said his experiments upon these classes of animals had led him to doubt very gravely the therapeutic efficacy of this measure in the treatment of disease, and that he considered the practice indefensible, except in hopeless cases.

M. DeSintef gave reasons why intra-vascular injections of milk were to be considered very dangerous. Fresh milk was certainly least so, but even so soon as 40 minutes after having left the udder, there formed around the globules a film of coagulation,

thus constituting a supplementary envelope, which, according to his investigations of the emboli caused by the injections, produced the infarctions. According to M. Laborde, the red blood globules assimilated the milk globules, which latter surrounded the former, "fusing," as it were, and constituting an envelope of a peculiar fringed appearance, which rapidly dissolved in ether, while the red globule remained intact. Laborde sacrificed a young dog a short time after an injection of milk into the veins, and, as a check experiment, another of about the same age, in which no injection had been made. In the first instance, the appearances of the red globules were found to be quite characteristic.

M. Ranvier wished to make some formal reserves (?) upon this subject of the assimilation of the milk globules by the red blood globules. He wished to remind histologists that the blood contained fat globules, yet it certainly seemed to him that it would be impossible to dissolve these by ether without affecting the red globules themselves. O. C. OLIVER.

ARTICLE XIV.

SOCIETY OF BIOLOGY. President, M. Paul Bert. Meeting, February 15, 1879. EMPLOYMENT OF PROTOXIDE OF NITROGEN IN SURGICAL OPERATIONS.

M. Paul Bert said all the world knew the use that dentists made of the protoxide of nitrogen to anæsthetize their patients. They employed the protoxide chemically pure. American surgeons have also tried the protoxide of nitrogen in the larger surgical operations, but as it is necessary often to suspend the inhalation in order to avoid danger of asphyxia, and as consciousness returns almost immediately upon withdrawal of the anæsthetic, it follows that continuous operation with this anæsthetic is impossible. The speaker had long sought an anæsthetic at once innocuous and efficacious, and had communicated to the society the results of his experiments on the physiological effects of certain anæsthetics, among them the protoxide of nitrogen. Without detailing his experiments at length, he wished to state that

he had been led to give the preference to a mixture of the protoxide with oxygen. The mixture he had employed consisted of 85 parts of the former with 15 of the latter. He found that a bird would live in this mixture for 24 hours. By repeated experiments he had so familiarized himself with the physiological action of this mixture that he tried it in an operation for "ingrowing nail." The pressure in the inhaling chamber was 17 centimeters. The patient, a young woman of 20, slept tranquilly, without having passed through any stage of excitation beyond very few slight contractions.

Almost immediately, on the withdrawal of the anæsthetic the patient recovered consciousness, and was able at once to walk unassisted to the ward, where she partook of her usual meal without any feeling of nausea or other unpleasant sensation except the pain of the wound.

Lymphatics of the Uterus.—Dr. Mierzejewski, of St. Petersburgh, presented, through M. Pouchat, a communication on the distribution of the lymphatics of the uterus. He stated that there are two planes of lymphatics; one superficial, the other deep, situated under the peritoneal covering, which two sets of vessels communicate by very free anastomoses. The blood vessels, less abundant than lymphatics, are contrary to the statements of Fridolin and Leopold, situated between the layers of lymphatics. These results are in accord with those obtained by Hoggan.

Reproduction of the Vitreous Humor.—M. Phillipeaux had made numerous experiments upon animals which seemed to prove that the vitreous humor is reproduced in the living animal. Punctures of the eye failed to extract entirely the vitreous humor, a small portion always remaining. O. C. OLIVER.

ARTICLE XV.

ANATOMICAL SOCIETY. President, Dr. Charcot.

M. Queneu read a communication on *Lesions of the Anterior Lobes of the Cerebrum.* The patient, a man of 78 years, was brought to the hospital, on the day following an apoplectic attack,

in an unconscious condition, with paralysis of the left inferior extremity and superior extremity of the same side, complicated by slight contraction limited to the hand and forearm of the afflicted side. These paralyses persisted until the death of the patient 6 days after of right lobular pneumonia. The autopsy showed upon the external surface of the right hemisphere, at the level of the superior extremity of the ascending parietal convolution, a spot which seemed less firm than the rest of the encephalon. This spot was so superficial at one point that a portion of its contents, a recent, dark colored clot, escaped through a small rent which appeared at the bottom of the fissure, separating the paracentral from the square lobe. Sections vertical and parallel to the "sulcus of Ronaldo," revealed a hæmorrhagic clot occupying a very small part of the *superior frontal* fasces, the greater part of the superior parietal fasces and rather more than half the superior pediculo-parietal fasces. All the neighboring parts, the corpus striatum, etc., were absolutely unchanged. The great interest of this observation is the rarity of such a lesion occurring in this region, so limited in its implication of the structures adjacent to its seat. The speaker mentioned a case communicated by M. Pitres. The patient, a woman of 65 years, became hemiplegic from an apoplectic attack in 1873. Six months afterwards the patient had an epileptic fit, acting upon the sound (left) side. These attacks repeated themselves in '74, '75 and '76, when the patient died. The autopsy revealed an ochreous clot of the size of an almond, extending from the base of the first right frontal convolution to the base of superior parietal lobule, and extending beneath as far as the superior extremities of the two ascending convolutions. The speaker also gave the notes of two cases in the service of Prof. Hardy. The first patient, a man of 65 years, was brought to the hospital with complete hemiplegia of the right side following an apoplectic attack. At the end of about 7 weeks contraction and atrophy of the paralyzed members supervened. Despite every precaution, a large "bed sore" formed, with diffuse phlegmonous inflammation with septicæmia, to which the patient succumbed. The autopsy revealed a hæmorrhagic clot situated in the superior fronto-parietal fasces of the left centrum ovale. The second case

was that of an old man of 88 years, brought to La Charité Hospital unconscious from an apoplectic stroke, and which presented, as a unique symptom, paralysis limited to the right members, which at the end of 8 days limited itself to the right superior member, persisting so without amendment or contraction till the death of the patient 7 weeks after. The autopsy revealed, besides atheromatous degeneration of the aorta and cerebral vessels, a spot of softening in the left hemisphere, which had the form of a broad fissure extending in an oblique direction as regards the fissure separating the two hemispheres, its anterior extremity situated at the summit of the cone formed by the inferior parietal fasces, its posterior at the sphenoidal fasces. M. Queneu then says that in these cases the lesions were so definitely limited as to render the clinical phenomena as clearly intelligible and as important diagnostically in locating lesions of the cerebrum as physiological experiments. M. Landouzy wished to suggest that the anomalous symptom presented by the patient, namely, contracture of the muscles of the hand and forearm, might be due to the irritation of the gray matter of the brain, since it was shown to have been lacerated at one point by the clot. The speaker had observed a case of hemiplegia (?) following apoplexy, in which case there were contractures of the hand and forearm, which appeared to be due to excitation of the cortical substance superficially intermediate to the paracentral and square lobes. M. Queneu said, in contrast to these cases with well marked symptoms, he wished to mention one in which every known rule of cerebral pathology seemed to have been violated, so to speak. This case was that of a tuberculous patient of 43 years, in whose brain he found a tuberculous deposit as large as a pea, in the inferior fronto-parietal fasces, and yet this patient had never presented a single symptom of cerebral trouble.

O. C. OLIVER.

HOTEL D'ORIENT, PARIS, February 28, 1879.

Domestic Correspondence.

ARTICLE XVI.

A LETTER FROM DENVER, IN WHICH ITS AUTHOR CLAIMS TO HAVE PRECEDED DR. EMMET IN LACERATION OF THE CERVIX UTERI AS A CAUSE OF DISEASE. Read by Dr. W. H. Byford before the Chicago Gynæcological Society, Jan. 31, 1879.

Denver, Col., Jan., 1879.

About four years ago the subject of laceration of the cervix uteri was brought before the medical society of the county of New York, by Dr. T. Addis Emmet, in a paper read before that society, and afterward published in the *American Journal of Obstetrics*, for November, 1874. That paper was received with applause by the New York society, and has since been received with great favor by the profession at large. It would appear from the manner in which the paper has been commented upon, that up to that time the importance of laceration of the cervix had not been at all appreciated by any part of the medical profession, and that except by a few physicians in and about the Woman's Hospital, this lesion had not been discovered. The title of Dr. Emmet's paper, the character of the discussion that took place at the time it was presented, as well as the tone of the publications of other physicians throughout the country, all tend to show that, up to the appearance of that paper, this injury of the cervix was unappreciated, if not unknown.

It is true, that in the *American Journal of Obstetrics* for February, 1869, Dr. Emmet had himself alluded, in a paper on the Surgery of the Cervix, to lateral division or laceration as a condition that sometimes complicated the treatment of dysmenor-

rhœa or sterility. That paper is entitled, "Surgery of the Cervix in Connection with the Treatment of Certain Uterine Diseases," and is devoted to the treatment of dysmenorrhœa and sterility by division of the cervix. He had not, it would seem, at the time of writing that paper, regarded lateral laceration as a cause of disease, but simply as a lesion that interfered with his method of treating dysmenorrhœa and sterility by anterior or posterior division. But on the 28th of September, 1874, the date of the reading of his paper before the Medical Society of the County of New York, he, for the first time, described this lesion as a cause of uterine disease. In the title of his paper he calls it an unrecognized cause of disease.

Dr. Emmet did not, of course, mean that up to that time he had not recognized laceration, or that Dr. Sims and a few others had not; but what he does say or imply is, that except by a few physicians about the Woman's Hospital, this lesion had not been recognized. All the credit is therefore awarded, by the profession, to Dr. Emmet, for being the first to appreciate and describe the lesion as a cause of disease.

Three years before Dr. Emmet's paper appeared, I had written a paper on this subject, which was intended to demonstrate the importance of this accident. This communication of mine was published in the *American Practitioner* for June, 1871, and was at the time sent, in pamphlet form, to all the leading gynæcologists of the United States. That paper not only shows that I had recognized laceration as a cause, and a very important cause, of disease, but it brought, for the first time, this matter to the attention of the profession.

Besides the two papers of Dr. Emmet already referred to, he has still another, written to explain more fully his mode of treatment. This paper is published in the *American Practitioner* for January, 1877. The reason for publishing it is thus stated by himself: "But, unfortunately, too much has been expected of the operation; it has been performed frequently without understanding its principles, and generally without proper preparatory treatment. The consequence has been that within the circle of my professional acquaintance I have already heard expressions of

disappointment from not getting the good results which had been promised for the operation."

This operation consists in making fresh or raw the edges of the rupture, and uniting them with silver wire sutures. That disappointment should have been experienced in a large number of cases treated this way is not, in my judgment, to be greatly wondered at. The condition of the cervix and the mucous membrane covering the cervix is, in a large number of the cases presented for treatment, such as almost to preclude the hope of success. These conditions are well described by Dr. Emmet. The cervix is inflamed, indurated and enlarged. The mucous membrane is inflamed, and its follicles, along the tract of the canal, are in a state of cystic degeneration. To bring together these edges, with the cervix in this diseased state, and expect them to unite, must, it seems to me, very frequently result in disappointment. Dr. Emmet explains the cause of the disappointment in his last article on the subject. He says there must, in many cases, be some preparatory treatment; that when the cervix or its mucous membrane is much diseased, its condition must be improved before the operation is undertaken — the inflammation and hypertrophy must be reduced, and the degenerated follicles removed from the mucous membrane. But just here is the difficulty that so many surgeons have encountered, and will always encounter, in the management of these cases. To remove chronic inflammation and hypertrophy of the cervix, especially if this hypertrophy is due, as he suggests, to arrest of involution, is a work that cannot be accomplished in a few weeks or in a few months. It is always a tedious work, and in not a few cases, either from the exhausted state of the patient, the unfavorable circumstances in which she is situated, or from the extent of disease present, it is a work that cannot be accomplished at all.

In my paper, published more than three years before Dr. Emmet's, I say: "I can see no reason why, after the inflammation is somewhat reduced, and the edges of the wound are fit for union, one or more silver wire sutures may not be used to close the edges, just as Jobert recommended for vesico-uterine fistula."

Dr. Emmet very properly insists that the operation for uniting

these edges should not be performed until the parts are fit to be united. This is just what I stated more than three years before his paper was written. This operation had, at my suggestion, been performed by Dr. E. C. Gehrung, formerly of this city, nearly two years before Dr. Emmet's paper was published, and the case described by me in my report on gynæcology to the Colorado State Medical Society in 1875. In this case there was no induration, no hypertrophy, no cystic degeneration. The parts were "fit to be united," and the operation was entirely successful. At the date of the writing of my paper, I had not myself attempted to cure these cases, except the severest ones, and these I had cured by amputation. But at the time Dr. Emmet first called the attention of the profession to laceration of the cervix as an unrecognized cause of disease, I was treating and curing these cases by amputation when the cervix was much diseased, or by sutures when the parts were in condition, or could be brought in condition to unite, and my views had been published and widely disseminated.

But even if the operation of repairing the cervix could always be as successfully performed as it is said to have been in the skillful hands of Dr. Emmet, I still think there are objections to it, for however successfully the union may be effected, the cervix must be left in a mutilated condition. The delicate mucous membrane formerly lining the canal will have been destroyed by the pressure and friction to which it has been subjected, if not by the cystic degeneration it will have undergone. Important changes will also have occurred in the form of the cervix; its conicalness is increased, its integrity impaired.

Dr. Emmet is of opinion that laceration occurs generally as an accident of labor at full term, and especially after instrumental delivery. It cannot be doubted that lateral laceration is sometimes produced by the great size of the child's head, by the use of instruments, or by the too rapid delivery; but I have for several years regarded laceration as an accident of premature delivery. So fully am I convinced of the correctness of this statement, that I never now meet with a case of laceration that I do not enquire as to the date and number of the miscarriages. I cannot think that ruptures so extensive can occur very often at

the full term of gestation; but it is easy to understand how it will occur in the early months of pregnancy by the passage of the fœtus through a cervix that is, as yet, undeveloped, and whose function it is to guard the pregnancy until the expiration of the full term of gestation. But however this may be, I am certain of the fact that lateral laceration is most commonly caused by abortion—by the premature passage of the fœtus through the unprepared or undeveloped cervix.

Dr. Emmet, in his last article, in describing the minute details of the operation, urges, as a condition of success, that the opposite edges of the laceration shall be quite thoroughly pared or cut away. This must, in many cases, produce, when the wound has healed, great conicalness of the cervix. My experience with these cases does not enable me to speak with positiveness as to the effect that this altered state of the cervix will exercise in preventing future conceptions; but knowing how frequently sterility is due to a conical cervix, I suspect that pregnancy is not common after this operation. Although this operation has been performed many hundred times in the city of New York alone, I have seen no statistics on this point. I will suggest further as my belief, that should a pregnancy occur, the cervix, should much of its substance have been removed, could hardly escape aceration at the time of delivery.

W. H. NEWMAN, M.D.

ARTICLE XVII.

REPLY TO THE LETTER FROM DR. NEWMAN.

Chicago, Feb. 25, 1879.

The communication of Dr. Newman, which was read at the last meeting of the Chicago Gynæcological Society, is so remarkably colored and so misleading in what it contains and in what it strangely omits, that justice alike to Dr. Newman, to Dr. Emmet, and to the medical profession, demands a reply. Dr. Newman bases his claim upon priority of publication, and is aggrieved because the profession accords to Dr. Emmet the "credit

of being the first to appreciate and describe the lesion as a cause of disease." In the paper to which Dr. Newman has alluded, published February, 1869, Dr. Emmet, in connection with the subject of dysmenorrhœa and sterility, speaks of bilateral division of the cervix as an operation productive of evil, and says:

"After this has been done (bilateral division) other difficulties of a serious character arise as a consequence, which more than counterbalance any temporary advantage. But I shall again refer to this subject when treating of lacerations following parturition."

On another page he sums up the evils arising from bilateral division of the cervix, as follows:

"My objections to the lateral operation * * * as an exciting cause of disease are due to the fact that, if gaping of the flaps occur a tendency exists to a rolling out of the lining membrane of the canal. An erosion extending into the canal is soon established, which will recur as often as healed, with the result in time that the whole organ becomes hypertrophied. This source of irritation is due to the fact that whenever the female is on her feet the flaps become separated from pressure on the posterior wall of the vagina. The everted lips in due time become softened and flattened so as to lose all appearance of ever having been in contact. I have seen this condition presenting the appearance of an enormous cervix, over two inches in diameter, with the whole organ enlarged, and every attempt at treatment proving a failure until the true condition was appreciated. I have frequently observed the same effects following lateral laceration of the neck as a result of parturition, and to some extent where only one side had been involved. * * * When lacerated laterally, and the case has been of long standing, the edges of the neck will be felt projecting beyond the vaginal junction as the top of a half-grown mushroom over its stalk. I invariably bring about union of the two surfaces before attempting any other treatment (for dysmenorrhœa, or sterility), whenever I meet this condition in practice, whether it be the result of surgical interference or a consequence of labor."

Then follows a description of the operation substantially as he performs it to-day.

It is therefore certain that Dr. Emmet described laceration as a cause of disease and its operative cure in a paper published more than two years before Dr. Newman published his memoir.

But what does Dr. Newman mean in the following comments upon the very paper from which I have just quoted.

"He (Emmet) had not, it would seem, at the time of writing that paper (February, 1869) regarded lateral laceration as a cause of disease, but simply as a lesion that interfered with method of treating dysmenorrhœa and sterility by anterior or posterior division. But on the 28th of September,

1874, * * * he, for the first time, described this lesion as a cause of disease."

The following is quoted from the memoir of Dr. Mundé,* editor of the *Americal Journal of Obstetrics.*

"Emmet's† first operation was performed November 27, 1862, in the presence of his assistant, Dr. G. S. Winston and of Dr. T. G. Thomas. Although during the next seven years he repeated the procedure many times in the presence of numerous professional gentlemen from all parts of the Union, his first published account of the operation and its technique did not appear until February, 1869. * * * In this publication Dr. Emmet was preceded by a few months by Dr. M. A. Pallen‡ who, independently, he informs me, described substantially the same operation for the same purpose. * * Dr. Pallen calls the lesion "uterine harelip." The operation itself, and after-treatment, are described precisely as by Dr. Emmet, to whom Dr. Pallen (in a letter to me) unqualifiedly accords the priority in devising the operation and recognizing its indications. * * * In spite of these two papers and the constantly increasing number of operations performed by Dr. Emmet, amounting up to 1874 to nearly 200, it was not until the reading of a second and more lengthy paper by Dr. Emmet, * * * September, 28, 1874, * * * that the profession became fully aroused to the immense value of the discovery of the lesion, its consequences and its cure."

Dr. Pallen, who actually anticipated Dr. Emmet in publication, and who operated long before Dr. Newman pretends to have operated, lays no claim to priority in devising the operation or recognizing its indications, while Dr. Newman deliberately implies priority in publication, which he ought to know does not belong to him; and what is even more exasperating, he has left in doubt the question whether he did not also precede Dr. Emmet in recognizing laceration as a cause of disease and devising the operation for its cure, for while he shows a remarkable familiarity with the memoirs of Dr. Emmet, from which he quotes detached sentences and suppresses others to suit his purpose, he strangely omits all mention of the date of Dr. Emmet's first operation, November 27, 1862, six years before the memoir of Dr. Pallen, seven before that of Dr. Emmet, and nine before his own, but is careful to state that at the time Dr. Emmet "*First called the attention of the profession to laceration of the*

* *American Journal of Obsterics*, Jan., 1879.

† A paper by Dr. E. C. Dudley, in the CHICAGO MEDICAL JOURNAL AND EXAMINER, March, 1879, contains the full report of Emmet's first case.

‡ St. Louis *Medical and Surgical Journal*, May 10, 1868.

cervix as an unrecognized cause of disease," meaning 1874, not 1869, he (Newman) was treating such cases sometimes by amputation when the cervix was much diseased, and by suture when the parts were in condition, or could be brought in condition to unite.

Has Dr. Newman studied the methods of Emmet with such diligence in vain? If so, why does he talk of amputation in the very class of cases in which, after proper preparatory treatment, the suture accomplishes its most brilliant and satisfactory results? Experience has abundantly proved that all of these worst cases may be brought in condition for union unless some constitutional cause prevents.

But if Dr. Newman had presented his memoir at any time after 1862, he would have difficulty in establishing his claim to novelty, because since that date few weeks have passed in which Dr. Emmet failed to deliver an informal clinical lecture at the Woman's Hospital, and in these lectures laceration of the cervix was always a favorite theme. Long before the memoirs either of Newman or Pallen appeared, representatives of the profession from *remote States* in the Union, and many also from Europe, had heard him describe laceration as a cause of disease, the treatment preparatory to operation, and had seen him perform the operation. Any one by visiting the Woman's Hospital on almost any of Emmet's operation days, could therefore have carried away the material for an excellent memoir on laceration of the cervix. In fact, the memoirs of Emmet merely contain the substance of three clinical lectures in pamphlet form.

Dr. Emmet never claimed to have been the first to recognize laceration of the cervix. I have his written statement, in a recent letter, that the "cleft" or "fissure" or "uterine harelip" must have been felt and seen from the beginning, but he was the very first to demonstrate that the erosion of the everted intracervical membrane, formerly called "ulceration," is always a laceration. No one before him showed that the cervix may present a normal shape and an apparently normal os externum and yet be the seat of laceration extending even past the utero vaginal attachment. He first demonstrated that the lacerated flaps generally become so softened and flattened by

resting on the floor of the pelvis that they lose all appearance of ever having been in contact with one another, and that the intra-uterine tissue and membrane roll out and form a spurious external cervix which, in shape and position, usurps the place of the normal external cervix. As the late Dr. Peaslee* said, "it was he, who in a happy moment brought the anterior and posterior surfaces together with two tenacula, and instantly (by causing the everted tissue and membrane to roll in) demonstrated that what we all thought was an ulceration was nothing more or less than a laceration.

Dr. Emmet is falsely represented as urging as a condition of success, "that the opposite edges of the laceration be quite thoroughly pared or cut away. He never advocated such denudation except in a few very exceptional cases. Dr. Newman will probably, therefore, have in future little or no use for his idea of the "conical cervix" as a result of the operation. The correspondent urges some *a priori* objections to the operation, but with commendable modesty assigns his limited experience as a reason for not insisting upon them all.

When Dr. Newman proves that laceration occurs more frequently in premature than in full term delivery he will have no difficulty in establishing the accuracy of his assertion. But respecting these opinions I have nothing to add, since this is a controversy, not of opinions, but of facts.

No amount of prospective fame ever tempted Dr. Emmet into premature publication. He waited until he had operated two hundred times for laceration of the cervix, and then twelve years after his first operation so exhausted the subject that little remains to be said. In his work on Diseases of Women, now in preparation and soon to be published, he has pursued a similar course, for few, if any, surgeons in the past twenty-five years have done more of modern gynæcological surgery than he has done. The chaff, the controversies, and out-worn theories which beset the practitioner and distress the student are chargable to men who have written for reputation or notoriety rather than from experience, reflection, and classified knowledge.

E. C. DUDLEY, M.D.

* Mundé *Am. Jour. Obst.*, Jan., 1879.

ARTICLE XVIII.

HOW SHALL THE DEGREE OF DOCTOR OF MEDICINE BE CONFERRED?

Messrs. Editors:—In the call for the convention of medical colleges to be held in Atlanta, May 2d, it is stated that the objects of the convention are "To adopt some uniform system of instruction more in harmony with the requirements of the age," and the following questions are suggested for discussion: "Shall all the colleges require attendance upon three regular courses of lectures during the three separate years ere admitting students to become candidates for the degree of M.D. Is any uniform system possible, and, if so, to what extent is it possible or even desirable at the present time?"

For several years these questions have engaged the attention of the entire profession, but more especially of those engaged in teaching.

Having thought much upon this subject, I accept the invitation which the call extends, for free discussion, and venture to suggest what seems to me a practicable remedy for many of the existing evils due to our present methods of medical training—a remedy which will render it easy to raise the standard for graduation to any desirable grade. With regard to the requirements for graduation, all admit that knowledge is the essential element; but many will disagree as to the best methods of teaching. When or how this knowledge is secured is a matter of little importance providing satisfactory evidence of its possession is required before a degree can be obtained.

We would be glad if the association of colleges could agree to require attendance on three full courses of lectures, and these of nine months each, prior to examination; yet we think the desired result can be obtained without this arrangement.

Practically it matters not where the student gets his information, or how long he is in obtaining it; if he has the requisite knowledge, he should be allowed to graduate; however, as a

knowledge of medicine must necessarily come from long and arduous study, probably no injustice would be done by requiring four full years of medical reading and three courses of lectures prior to graduation. In justice to students, we believe the colleges should institute preliminary examinations, or require other satisfactory evidence of a thorough English education, before admission to their classes; for it is clearly unfair to lead a student to believe he can graduate, to waste his time and accept his money and then refuse to give him a degree because he is ignorant of his mother tongue; and certainly, in this age there is no such pressing need for physicians as to excuse the graduation of those not thoroughly qualified. We would not demand a familiarity with the ancient languages, for although their utility is beyond question, they are not essential if the English be thoroughly understood.

If the convention considers the question of requiring attendance on a specified number of courses, the question of fees is likely to arise, and it may be attempted to secure uniformity in this respect. Such an attempt would doubtless lead to discord, for if uniformity in fees were secured, it would militate against the interests of the weaker colleges. The different colleges should remain free to charge as much or as little as they please, excepting the graduation fee; this latter should be substituted by an examination fee of five or ten dollars (sufficient to cover all expenses attending the examination and issuing of degrees), and no part of this amount should in any case be refunded.

In lieu of the graduation fee, colleges might add something to their fees for each course. This arrangement would cost the colleges nothing; it would be just to students and would remove the opportunity which the public now has for charging the colleges with mercenary motives in graduating some members of their classes.

To repeat, we would suggest preliminary examinations, and an increase of the length of time a student shall read medicine before entering as a candidate for graduation; that colleges remain free to charge what they please for a course of lectures, but that the graduation fee be abolished and its place filled by an examination fee; and that every college use the facilities at its disposal

as best it may in teaching. But we also suggest, and would be glad to urge upon the thoughtful consideration of the convention, a radical change in the method of conducting the final examinations, which would secure uniformity in the requirements for graduation, and at the same time allow the various colleges, without detriment to any of their own interests or to those of the profession at large, to demand any amount of knowledge they may deem necessary before granting the degree of doctor of medicine.

We would like to see those requirements equal those of the colleges in any other country, but this is a matter which might he left to the wisdom of the general profession if the colleges will unite on a uniform system of joint examinations.

We would suggest the election, each year, of a board of examiners, to consist of thirty members, one-third of whom should be elected by the delegates to the Association of American Medical Colleges, from among the teachers in the various colleges, one-third to be elected by the same body or by the American Medical Association, from the profession at large, and one-third to be appointed by the Surgeon-General of the United States from the medical officers of the army and navy; or what might perhaps be better, the entire board to be appointed by the Surgeon-General.

It should be the duty of this board to prepare lists of questions on the various topics for examination, which should be kept secret until the hour of examination, and on a stated day of each year to furnish these questions, in sealed envelopes, to the various colleges, in which, on stated days, the same date in all of the colleges, the envelopes should be opened before the faculty, members of the local profession and the graduating class. One envelope containing questions for examination upon a specified topic to be opened in this manner each day, and the questions given to the graduating class. Thus, examinations in surgery at ten o'clock a. m., June 1st, or any other date agreed upon; in obstetrics at ten o'clock June 2d, and so on until the examinations are completed, the dates, hours and topics being the same for all the colleges. The student should be allowed three or four hours to write down his answers, due precautions being taken by the faculty and local profession, that he received no written or other aid in

his examination. The examination papers might be written with copying ink or pencil, and copies taken of each for future reference.

They should then be sent by express to the Board of Examiners, which should convene on a certain date—for instance, the second day following the last examination—to examine and mark the returns, and issue certificates to the colleges permitting the graduation of all students whose examination average should exceed a certain specified number, say, 70, 80 or 85, the students having been marked on a scale from 1 to 100; 100 being perfect.

If the work of examining the papers should prove too great a task for the Board of Examiners, they might be empowered to select any needed assistants, taking care that the examiners should not know from what students the papers came, and thus avoiding all possibility for the marks being affected by personal friendship or other indirect causes.

No student whose general average fell below the requirements should be allowed to graduate.

Examinations should be held only once a year, and in cases of failure to pass, second examinations should not be granted before the next regular examination.

The adoption of this or some similar method of joint examinations would at once secure a high grade of proficiency in medical graduates throughout the United States, and would thus accomplish an end for which the whole profession is anxious.

By this method no local interests would be affected, each college would still grant its own diplomas, and all could be sure that incompetent men had not been graduated.

It may be objected to this method that such an examination would require much time and expense. Admitting this, would not the ranks of the profession be recruited rapidly enough even then? However, the time probably would not be much more than that now required by the best colleges for their examinations; and even if it should be greater, it could make no possible difference whether the candidate should receive his diploma in ten days or three weeks after the examination, nor would it matter whether he graduated in the latter part of February or June.

The examinations might be held at the most covenient time, and colleges could easily arrange their courses to correspond.

It may be stated that it would be impossible for the board to examine so many papers. This does not seem to me impossible, or even difficult.

Suppose there were fifteen hundred applicants for the degree, and that each of them had been examined on fifteen different topics, we would have 22,500 papers in all, which would be distributed among the different members of the board. Each could easily examine seventy-five papers in one day, making for the whole board 2,250, and ten days of such work would complete the list.

If the examination fee were ten dollars, this would furnish $15,000 to pay the expenses, which would allow $20 per day for fifteen days, or $300 for each member of the board, and would leave a balance of $6,000, out of which to pay the express charges and the cost of diplomas, stationery, etc.

The time would be a matter of no importance; the means would be ample, and the whole could be systematically managed by a permanent secretary.

I have here given an outline of what to me seems a practicable and speedy method of raising the grade of medical education. This is an outline only, but the minutiæ can be easily supplied.

This method would be uniformly just, inasmuch as all students would pass the same examination.

Any method which does not include a joint examination will fall short of the end desired, for however long the course or thorough the teaching, there is always an opportunity for influences to favor the graduation of incompetent men so long as the immediate instructors constitute the graduating board. This is clearly shown by recent complaints concerning the medical schools of Great Britain, and it is not difficult to suggest causes which in certain cases might operate in this way.

Difficulty may arise as to the method of selecting an examining board, from fear that some students would receive beforehand an intimation of the questions to be asked, but it is not reasonable to fear that a board elected annually and pledged to secrecy

would be so dishonorable as to adopt any means for favoring individual students or any particular college.

E. FLETCHER INGALS, M.D.

188 CLARK ST., CHICAGO.

ARTICLE XIX.

OPIUM SMOKING.

Dear Sir: I enclose you a brief article on opium smoking. It was published in the *Missionary Herald*, January, 1879, the organ of the American Board of Commissioners for Foreign Missions, and is altogether reliable.

R. C. HAMILL, 629 Wabash av.

February 10, 1879.

OPIUM ASYLUM AT FOOCHOW.—TREATMENT.

Can the victim of opium smoking be rescued? It is commonly believed that, so terrible is his appetite, he is beyond help and hope. The asylum at Foochow has demonstrated the falsity of this assertion. Connected with the hospital of our mission, under charge of Dr. Osgood, there is a separate building for the treatment of opium smokers, where about sixty patients are received each month. In response to an inquiry as to the method of treatment, Dr. Osgood sends the following account of his practice for the last two years, during which time about 800 cases have been treated:

"1st. The total and absolute discontinuance of the use of opium from the beginning of treatment.

"2d. A trusty attendant to be with the patient, day and night, for the first three days.

"3d. Chloral hydrate for the first three nights, if required.

"4th. Good food, milk, raw eggs, brandy (in some cases), chicken broth. (The above to be taken in small quantities and frequently.

"5th. In diarrhœa, give two drachm doses of a mixture of equal parts of tincture catechu and tincture ginger.

"6th. Vomiting will frequently yield to bismuth in fifteen grain doses; and in some cases a single dose of calomel has acted like a charm. Ice would be of advantage in some cases.

"7th. Throughout the entire treatment it should be remembered that the patient is below par, and requires tonics. Quinine and tincture of iron have a prominent place in our list.

"8th. The patient should expect to suffer more or less for the first three days, and should make himself a prisoner for that time. By the fourth day there is usually marked improvement.

"9th. Usually, by the sixth day all desire for opium is gone. The patient then requires a change of air and surroundings, and tonics for a few weeks.

"The above is a rough outline of our treatment. Each case treated may require some change from the above.

"I believe that ninety-nine out of one hundred can be cured, if the patient has the requisite grace and grit. Out of eight hundred cases there has only been one death, and that was caused, I think, by apoplexy, and not by opium."

SUBERINE FOR CHAPPED NIPPLES.—(*L'Union Médicale du Canada*, January, 1879.)

The treatment recommended by M. Brochard for fissured nipples is so simple that it deserves to be popularized. When chaps exist on the nipples, whatever their extent, the nipple should be washed with pure water, and then dried and dusted with suberine, which, as is known, is impalpable cork powder. The author has used it for several years, and prefers it to lycopodium, for infants, because it contains tannin, and besides is much cheaper. Over the suberine is placed a piece of gold-beater's skin, cut star-shaped, in the center of which several punctures are made with a fine needle. Every time the child is suckled, the suberine is washed of with water, and the gold-beater's skin replaced, the child drawing the milk through it without giving pain. When the child is done, the suberine is again applied as before, and so on.

Reviews and Book Notices.

ARTICLE XX.—TRANSACTIONS OF MEDICAL SOCIETIES.

1. *Transactions of the American Ophthalmological Society.* Fourteenth annual meeting, held at Newport, R. I., 1878. Vol. II., Part 4.

2. *Transactions of the American Otological Society. Eleventh Annual Meeting.* Newport, 1878. Vol. II., Part 2.

1. The transactions of this society are presented in a modest pamphlet of 150 pages. As usual, there is but little chaff in the published proceedings of this society. Almost every page teems with new and interesting matter. This example of thorough winnowing is worthy of imitation by other societies.

First following the minutes of the meeting is a portrait or brief sketch of the life of Dr. H. Althof, one of the founders of the Society, who died Jan. 15, 1877.

Dr. A. Mathewson contributes "Notes on the Use of Nitrous Oxide as an Anæsthetic in Strabismus Operations." He thinks this agent offers special advantages as an anæsthetic in these operations over chloroform or ether, in that its effect so speedily passes away. In five cases he reports in which nitrous oxide was used, anæsthesia was produced in from one to two minutes and consciousness returned almost immediately. From seven to twenty gallons of liquid gas were used at a maximum cost of one dollar.

The relations of blepharitis ciliaris to ametropia receives further attention from Dr. Roosa. Since reading his first paper on this subject, in 1876, 201 cases of blepharitis have been observed at the Manhattan Eye and Ear Hospital, but in only 48 was the state of the refraction noted. In these, hypermetropia was found

in 34, myopia 1, astigmatism 7, emmetropia 6. He has seen 46 cases of blepharitis ciliaris in private practice, in which there was found hypermetropia 25, astigmatism 17, myopia 2, emmetropia none. The refraction was not determined in two cases.

These statistics are remarkable, and we agree with the doctor that they "are certainly very different from those given by Dr. Alt," and we might add from the experience of others. However, we do not seriously object to the conlusions of Dr. Roosa, and do not see that they are severely antagonized by Dr. Hotz's paper,* which Dr. R. refers to as an answer to his (Roosa's) first paper.

Dr. J. S. Prout has a good article on "Lachrymal Conjunctivitis and some of the other Injurious Effects of Retention of the Tears." We are convinced that obstruction to the tears is a factor too often overlooked or disregarded in the treatment of conjunctivitis, and heartily endorse this article.

Dr. C. R. Agnew contributes an interesting paper on "Cases of Ophthalmic Disease in which Enforced Exposure to Light and Air was Salutary."

A practical and rapid method, with an instrument, for the diagnosis of refraction is presented by Dr. Wm. Thomson.

We are unable to pass upon the merits of the method or instrument from simply reading the description of them.

Dr. John Green also offers some improvements in instruments and appliances for diagnosis: 1. "Test Diagrams for the Detection and Measurement of Astigmatism." 2. "Stereoscopic Diagrams for Testing Binocular Vision." 3. "A New Modification of Loring's Ophthalmoscope." 4. "Improved Series of Arrangements of the Glasses of the Trial Case for Measuring Refraction."

Dr. E. G. Loring presents still another modification of the ophthalmoscope.

Dr. David Webster has an article on the "Ætiology of Retinitis Pigmentosa, with Cases."

Of the 22 cases presented, consanguinity of parentage was traceable in only 3, while heredity was present in 7 cases.

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* Published in the JOURNAL AND EXAMINER, April, 1878.

Interesting cases are presented by Drs. Strawbridge, Bull, Vennyne, Derby, Dixon and others.

Numerous wood cuts, illustrating the text, add to the value of of these transactions.

2. "The Transactions of the Otological Society for 1878," is a neat pamphlet of 280 pages. More than 200 of these pages are filled with the interesting and exhaustive report on the progress of otology by Drs. Vennyne, of Massachusetts, and Sexton, of New York. This report is unusually long from the fact that there was no meeting in 1877, and it covers a period of 2 years.

First following this is a short article by Dr. C. J. Blake on "Acupuncture and Drainage in the Treatment of Serous Effusion into the Tympanic Cavity." The object in view is to avoid the irritation of the discharge upon the inner extremity of the auditory canal in those cases requiring paracentisis of the membrana tympani.

Drainage is effected by means of the absorbent cotton.

There may be exceptional cases in which this treatment would be worth the trouble, but we do not think the irritation from a serous discharge would be sufficient to demand it often.

Interesting cases are reported by Drs. J. Orne Green, A. H. Buck, C. R. Agnew, Geo. Strawbridge, A Mathewson and others.

Dr. Sexton has also an interesting article on "The Relations of the Conducting Mechanism of the Ear to Abnormal Hearing." He concludes that "Two distinct conditions appear to contribute to the abnormities of hearing: disarticulation of the malle-incudal joint and alterations in the tension of the membrana tympani." We agree with the doctor when, in speaking of the inner ear, he says, "Too great importance has perhaps been given the affections of this portion of the ear, especially as regards the acoustical anomalies." But it is certainly taking extreme ground in the other direction to relegate all abnormities of hearing to the conducting mechanism.

Dr. J. Orne Green has an article on "Objective and Subjective Systolic Murmurs in the Ears." His conclusions are that these murmurs may be divided into three classes:

Physiological murmurs in the internal carotid, dependent on partial stenosis of the carotid canal.

Pathological murmurs in the internal carotid, probably caused by a reduced vascular tension dependent upon disturbances in the vaso-motor system.

Pathological murmurs from aneurisms of the vessels of the head. W. T. M.

ARTICLE XXI.—THE CELL DOCTRINE; ITS HISTORY AND PRESENT STATE. By James Tyson, M.D., Professor in General Pathology and Morbid Anatomy in the University of Pennsylvania. Second edition, illustrated. Philadelphia: Lindsay & Blakiston.

The second edition of this well-known monograph issues from the press of L. & B. in elegant form. Readers of the first edition will find in this a large addition to the previously copious bibliography, and the incorporation and adaption of Flemming's observations (with Klein's indorsement) on intra-cellular structure. The tracing of the history and development of the cell doctrine is also somewhat more elaborate—we had almost said tedious—for we think that the value of the book would be enhanced in the eyes of nine-tenths of its readers if less space were given to the resurrection of dead and buried theories—some of them scarcely relevant, and more to the application of the prevalent theory to the facts of physiology and pathology.

The author credits Schleiden (1838) with the conception of the cell as the unit of structure, and Schwann with the successful application and demonstration of this conception in animal tissues; Martin Barry (1840) with a demonstration of cell-genesis by division of the nucleus; Max Schultze (1861) with having overthrown the vesicular idea of cells previously popular; and with identifying cell-contents with "sarcode." He credits Flemming with observations on intercellular structure, but neglects to mention Hensen's previous work in the same line.

Prof. Tyson thinks, however, that the present cell-doctrine was born of Beale, or rather, he adopts that born of Beale as the present cell-doctrine, and elaborates at length Dr. Beale's views on germinal matter and formed material. We notice with pleasure that the author deprecates the use of the term protoplasm, because of its ambiguity—being applied by some to the germinal

or living matter, by others to the non-germinal or formed material. He proposes the substitution for protoplasm of Beale's name "bioplasm," which is not now, and from its derivation can never be, similarly misapplied.

He would further substitute "non-germinal" for Beale's "formed" material—an objectionable change, which should and will fail of general adoption. He indorses Auerbach's views that nucleoli are proven, by their amœboid movements and by their reactions toward staining agents, to be daughter cells; he thinks that a nucleus—i. e. a *differentiation* of germinal matter—is not essential to a cell; accepts Beale's interpretation of intercellular substance—that it, like the formed material proper, is transformed germinal or nuclear matter; and frowns mildly upon spontaneous generation and Charlton Bastian.

While, therefore, the book has a certain interest as a historical memoir, it is chiefly valuable for its clear and concise statement of Beale's views, and for its copious references to the literature of this and kindred subjects. W. J. B.

ARTICLE XXII.—HUMAN OSTEOLOGY, Comprising a Description of the Bones, with Delineations of the Attachments of the Muscles, the General and Microscopic Structures of Bone, and its Development. By Luther Holden, F. R. C. S., etc. Fifth Edition, Revised by the Author, with the Assistance of Alban Doran, F. R. C. S., etc. Philadelphia: Lindsay & Blakiston, 1878; Chicago: Jansen, McClurg & Co.; 8vo pp. 280. Price $5.50.

Many of our readers probably are acquainted with this excellent book, and all undoubtedly know the name of Luther Holden as an anatomist and author of valuable works, of which his Human Osteology is neither the last in rank nor the least in merits.

The present edition is equally as complete as the former, and, therefore, it is to be regretted that in one instance its perfectness should be marred by the oversight of the proof-reader. It has escaped his attention that all the numbers in the text referring to the figures on Plate II. are wrong; for instance, the text refers to fig. 4 as a transverse section of bone, while fig. 4 represents a

longitudinal section; the text points to fig. 3 as illustrating the longitudinal section of bone, while fig. 3 represents cellular cartilage. This confusion of numbers in text and plate cannot fail to perplex the fresh students of anatomy, for whom the book has been written. Fortunately, however, under each figure on the plate is printed what it intends to represent, so that the errors in the text become apparent at once also to the uninitiated student of anatomy.

In the make-up of this book we notice the publishers have imitated the English style of binding the books with the leaves untrimmed. We never admired this, what seems to us, half-done style of book-binding; we do not like to read with a paper-cutter in the hand and we do not like to see a book in our library which looks as if every second leaf were coming out. We would suggest that the publishers adhere to their old fashion of sending out their books in that well-trimmed, elegantly-finished form for which American publications are admired all the world over. F. C. H.

ARTICLE XXIII.—THE ANTAGONISM OF THERAPEUTICS AND WHAT IT TEACHES. By J. Milner Fothergill, M.D., Edinburg.

In this little book, which is the essay to which was afforded the Fothergillian Gold Medal of the Medical Society of London, for 1878, Dr. Fothergill has given us in a concise form the most important results of the experiments which have been made to ascertain the physiological antagonism of an important list of medicines. This he does by detailing the experiments; by a practical inquiry relative to the experiments performed; by a discussion of the rhythmically discharging centers; by a discussion of the action of drugs on the circulation and respiration; the use of antagonisms in actual poisoning and in ordinary practice. We have no hesitation in saying that this little book will contribute largely, based as it is on such well-authenticated experiments, towards removing the stigma of empiricism which is so often but justly applied to a great deal of general practice. To show the practical bearing of the work we quote from the chapter on antagonism in actual poisoning. After detailing a case of poisoning by about seventeen grains of opium, Dr. F. says:

"If a case of opium poisoning were to present itself to me again, especially at an early stage, where I could carry out my ideal plan of treatment, it would go as follows: 'First, empty the stomach thoroughly, then inject a fourth or a third of a grain of atropine before the respiration is gravely affected; then put the patient to bed and carefully note the respiration, the pulse and the temperature. If the respiration were still failing after the administration of the atropine, to inject another third of a grain and still take careful notes, and give a third third of a grain, or even more, if the respiration still fell.'"

The chapter which treats of the action of chloral cannot but enlarge the views of all who read it. R. T.

ARTICLE XXIV.—ESSENTIALS OF CHEMISTRY, INORGANIC AND ORGANIC, FOR THE USE OF STUDENTS IN MEDICINE. By R. A. Whitehouse, A.M., M.D. New York: Wm. Wood & Co.

This little book, which can readily be carried in the pocket, consists of a series of questions and answers, and will form an excellent supplement to the general text book on chemistry. Some people pretend to disdain these small books, which serve in great part the purpose of a more expensive "coach." So far, however, as our experience has gone, those who have used them have always shown best in a case of examination, and their knowledge has not been the more shallow for the assistance thus afforded them. The series of questions on the compounds of carbon constitute an important feature of the book. For those fond of chemistry, who are so situated that they cannot obtain a teacher, this book will be a boon companion. For those who have a teacher it will be a valuable aid. R. T.

ARTICLE XXV.—ELEMENTARY QUANTITATIVE ANALYSIS. By Alexander Clanen, Professor in the Royal Polytechnic School, Aix-la-Chappelle. Translated with additions by Edgar F. Smith, A.M., PH.D.. Cloth, pp. 328. Phila.: Henry C. Lea. Chicago: Jansen, McClurg & Co.

The translation of this brief treatise on quantitative analysis will be found of benefit alike to professors and students who are not familiar with the original language in which it is written

The most approved methods of determining the different elemental and primary compound substances are clearly and concisely displayed, and the suggestions which the experience of the author has found desirable, constitute an important feature of the work.

R. T.

ARTICLE XXVI. ST. BARTHOLOMEW'S HOSPITAL REPORTS. Vol. XIV., 1878. Edited by W. S. Church, M.D., and Alfred Willet, F.R.C.S.

It is but a short time since we had the pleasure of noticing the "Reports" for 1877. The volume under present consideration is in no way inferior to it. Exception can hardly be taken to a single paper of the thirty-three contributed. Without attempting to notice each paper, we must make speical mention of the following: "Observations on Acute Rheumatism," by Dr. Southey; "On the Varieties of Icterus Gravis," by Dr. Legg. Sir James Paget has an admirable article on "Indurations of the Breast becoming Cancerous." Mr. Hussey reports a number of cases of Hydrocele, his favorite treatment being the seton, which in his hands has seemed very useful. Dr. Matthews Duncan reports a case of "Uterine Fibroid Complicated with Inversion;" and Mr. Lyons has an illustrated paper on the Treatment of Compound Fractures of the Lower Jaw, in which he favors the "wire interdental splint." Mr. Doran continues a former discussion on "Intra-peritoneal Ligature of the Pedicle in Ovariotomy," for which he puts in a well-considered plea.

Dr. Moore and Mr. Callender favor us with their experiences respectively, in the casualty and surgical departments. One of the most interesting papers in the volume, in a certain sense, is the "Account of the Casualty Department," given by Mr. Bridges. The casualty department is simply the vast hospital dispensary where some 200,000 patients are annually treated. He gives an admirable idea of the amount of work done by the staff, of the expense, and the amount of benefit actually rendered; and, on the whole, the paper will amply repay for reading by those connected with our smaller institutions of a similar character.

In a paper on "Manipulation," Mr. Marsh has a word to say

about the bone-setters and some of their results, giving cases. Mr. West follows with an "Analysis of Forty Cases of Rheumatic Fever," and Dr. Church with a very carefully reported "Case of Intra-thoracic Tumor." Dr. Harris has an interesting paper on the "Diagnosis and Treatment of Apparent Drunkenness," in which he shows how easy it may be to mistake the alcoholic for the apoplectic condition, and vice versa. He thinks it better to treat all such cases very carefully in order to be on the safe side.

Mr. Ormerod contributes some "Cases of Diseases of the Spinal Cord," and Mr. Steavenson some "Observations on the action of Pilocarpine" in three cases of Bright's disease, in each of which the drug had to be discontinued. Mr. Cripps adds some statistics with regard to the heredity of cancer; and Mr. Keetley a paper on "Compression versus Inflammation," in which he argues that the great advantages of properly applied compression are overlooked and under-estimated.

In the way of literature of special departments we are favored with papers by Mr. Clarke on "Wounds of the Ciliary Region," and by Mr. Vernon on "Commencing Cataract." Both of these are admirable. The series of papers closes with two papers by Mr. Willett on "Spinal Disease."

The "Proceedings of the Abernethian Society," and the usual statistical tables complete this fourteenth volume, which is replete with interesting matter. R. P.

ARTICLE XXVII. — CYCLOPÆDIA OF PRACTICE OF MEDICINE. Edited by Dr. Von Ziemssen. Vol. VIII. Diseases of the Chylopoëtic System, with Chapters relating to Diseases of the Bladder and Urethra and Male Genital Organs. Wm. Wood & Co., New York, 1878.

This volume includes articles by Ziemssen and Zenker on Diseases of the Œsophagus, including morbid growths, parasites, etc., covering 214 pages.

Bauer devotes 130 pages to Diseases of the Peritoneum, including typhlitis and perityphlitis. Mosler's contribution on Diseases of the Spleen covers 200 pages, and includes leucæmia and melanæmia.

Concerning Diseases of the Pancreas, of which little or nothing can be diagnosed during life, Friedreich gives us 80 pages; while Merkel adds nearly 40 pages on Diseases of the Supra-Renal Capsules, an equally obscure subject. With reference to the important topic of Bladder and Urethral Affections, Lebert furnishes an article of 150 pages, and Curschmann supplements it with nearly two-thirds as many pages on Diseases of the Male Genitals. We have been particularly pleased with the stand taken by the last two writers concerning the delicate but important topics of masturbation, seminal losses or spermatorrhœa, false and true, and the pages on chronic pyorrhœa in females, and pyorrhœa, both inflammatory and chronic, in males.

The volume is a very important one, and contains a vast store of information gathered from various sources in a very interesting and condensed shape. P.

Article XXVIII.—Cyclopædia of Practice of Medicine. Edited by Dr. Von Ziemssen. Vol. XIII. Diseases of the Medulla Oblongata and Spinal Cord. By Prof. Erb, of Heidelberg. New York, Wm. Wood & Co., 1878.

The volume opens with an introduction, anatomical and physiological, followed by general symptomatology and ætiology, and general therapeutics. This portion alone, from such a masterhand, is of great value. We are pleased with his views, coinciding, as they do, with those of the best specialists, that masturbation is not, *per se*, more pernicious than natural coitus.

Diseases of the Membranes of the Cord require 70 pages for their elucidation, while 540 pages are devoted to diseases of the cord itself. Under this latter head are included wounds, spinal concussion, spinal irritation, which the author recognizes as a distinct condition, and spinal nervous weakness.

Myelitis, Acute and Chronic, the Various Forms of Sclerosis and Paralysis, and "Rare and Doubtful Diseases" receive very extended consideration.

The balance of the volume is devoted to Diseases of the Medulla; this part opening with another introduction to this particular subject, equally elaborate with the rest of the author's work. Hyperæmia, anæmia, injuries, acute bulbar myelitis,

bulbar paralysis, and various other lesions are handled in a most scholarly way. We are inclined to think the author lays too much stress on the diagnostic value of the tendon-reflex, but this is a comparatively trifling matter. The book is of immense value, and should and does stand a monument to the indefatigable industry of its author. P.

BOOKS AND PAMPHLETS RECEIVED.

Health Primers; four vols. 1. Exercise and Training; by C. H. Ralfe, M.D. 2. Alcohol, its Uses and Abuses; by W. S. Greenfield, M.D. 3. The House and its Surroundings. 4. Premature Death, its Promotion and Prevention. D. Appleton & Co., New York.

Health and How to Promote It. By R. McSherry, M.D. Cl., pp. 185. 1879. Appleton & Co., New York.

General Surgical Pathology and Therapeutics, in 51 Lectures. By T. Billroth. Translated from German Ed. by C. E. Hackley, M.D. Cl., pp. 773. 1879.

Clinical Lectures on Diseases Peculiar to Women. By Lomb Atterill, M.D. Fifth Ed., revised and enlarged. Phil., Lindsay & Blakiston, 1879. pp. 342.

A Manual for the Practice of Surgery. By Thos. Bryant, F.R.C.S., etc. 2nd Amer., from 3d Revised Eng. Ed. Phil., H. C. Lea, 1879. Leather, pp 945.

Yellow Fever. By Thos. O. Summers, M.D.

Index to Original Communications in the Med. Jours. of U. S. and Canada for 1877. By W. D. Chapin. Cl., pp. 48.

Transactions of the Medical Society of the State of Tennessee at its Forty-fifth Annual Meeting. 1878.

First Annual Report of the State Board of Health of Illinois. 1878.

Transactions of the American Dermatological Association at the Second Meeting held at Saratoga Springs, Aug. 27, 28 and 29. 1879. Rep. from *New York Med. Jour.*, Oct., Dec., 1878, and Jan. and Feb., 1879.

Revue de la Clinique de Maladies des Femmes de la Faculté de Médecine de Lyon. By Joanni Rendu.

Points in Diagnosis of Hepatic Affections. By E. J. Janeway, M.D.

Circular in Reference to American Archæology. Smithsonian Miscellaneous Collection. 316.

In Memoriam, Dr. Landon R. Longworth. By F. Forchheimer, M.D.

Excerpta from the Annual Report to the Board of Health for 1878. By J Holt, M.D., Sanitary Inspector of the 4th District of New Orleans.

Information for the Taxpayers; Medical Laws; the State Board of Health; Finances.

Memorandum of the American Public Health Association on Legislation Affecting the Public Health.

Report on Aconitia in Trigeminal Neuralgia. By E. C. Seguin, M.D. Reprint from *New York Med. Jour.*, Dec., 1878.

Cases Illustrating Two Rare Diseases of the Eyelids—Syphilitic Gummata of the Conjunctiva. By Chas. Stedman Bull, M.D. Rep. from the Transactions of the Amer. Ophthalmological Society, 1878.

Diphtheria and Its Treatment. By Ch. H. S. Davis, M.D. Rep. from *Richmond and Louisville Med. Journal.*

Report of the Pennsylvania Hospital for the Insane for the Year. By Thos. S. Kirkbridge, M.D.

Report of Investigations into the Pathogeny of Diphtheria Conducted by Ed. Curtis, M.D., and Thos. E. Satterthwaite, M.D.

Address to the Medical Profession. By W. A. Hammond, M.D.

A Case of Inflammatory Fungoid Neoplasm. By Louis A. Duhring, M.D. Reprint from the *Archives of Dermatology* for Jan., 1879.

A Clinical Lecture on Anæsthetic Leprosy. By James Nevins Hyde, M.D. Reprint from *Amer. Practitioner*, Feb., 1879.

Medicine, the Present and Future. By J. W. Compton, M.D. Rep. from *St. Louis Med. and Surgical Journal*, Jan., 1878.

Proceedings of the Board of Experts Authorized by Congress to Investigate the Yellow Fever Epidemic of 1878.

Notes on Salicylic Acid. By Ed. R. Squibb, M.D. Read before the Medical Society of the State of New York, Feb. 2, 1875.

MEDICAL REMUNERATION.—Doctor: "Um! most insolent!" (To his wife) "Listen to this, my dear;" (reads letter aloud) "Sir: I enclose P. O. order for thirteen shillings and sixpence, hoping it will do you as little good as your two small bottles of 'physic' did me."—*Punch.*

Summary.

Collaborators:

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

ANATOMY.

ANATOMY OF THE MENINGEAL NERVES.—Duret. (*Brain.*, April, 1878.)

The following very lucid résumé of the origin and distribution of the meningeal nerves is extracted from a paper by Duret, "On the Rôle of the Dura Mater and its Nerves in Cerebral Traumatisms."

(*a.*) *Nerves of the Dura Mater.*—These all spring from the fifth pair. The *anterior* arise from the ethmoidal branch of the nasal and are distributed around the ethmoidal fossa and orbital roof. The *middle* spring directly from the Gasserian ganglion and proceed outwards, plunging immediately into the dura mater, nearer the internal than the external surface, ramifying in all directions over the temporo-sphenoidal region, and up to the parietal region of the membrane; several of the branches are lost in their course; two or three can be traced up to the vicinity of the superior longitudinal sinus. The *posterior* arise from the ophthalmic branch of Willis, not far from the Gasserian ganglion, cross the trochlear nerve, to which they are closely applied (some have thought they arose from this nerve), and arrive at the tentorium cerebelli, where they divide into external and internal branches.

The internal, two or three in number, course inwards so as at once to gain the base of the falx cerebri, into which they pass and

ascend to gain the vertex. The external pass toward the lateral sinus and bend so as to reach the posterior part of the falx cerebri, in which they lose themselves.

Duret is inclined to the belief that the nervous filaments which are situated nearer the inner than the outer aspect of the dura mater end in special terminal organs, which increase the delicacy of their sensibility. The marked physiological troubles which ensue on their irritation lead to this belief.

(*b.*) *Nerves of the Arachnoid and Pia Mater.*—Luschka and Bochdalek have described nerve fibers in the arachnoid. According to Kölliker these filaments belong to the vessels of the pia mater. It is certain that a large number of the nerve fibres coming from the sympathetic accompany the carotid and vertebral arteries in the cranium.

Purkinje and Kölliker describe nerve plexuses at the base of the cranium surrounding the arteries of the circle of Willis. Their fibrils accompany the vessels which proceed from this, and are distributed with them over the whole of the pia mater. Kölliker claims to have followed them into the substance of the brain as far as vessels of ninety-nine, and less.

All these nerve fibers which accompany the arteries so far are the vaso-motor nerves of these vessels. They are the agents of reflex vascular disturbances so often occurring.

PHYSIOLOGY.

ON ALCOHOL.—M. Rabuteau. (*Progrès Médical*, December 28, 1878, p. 979.)

M. Rabuteau exhibited to the Society of Biology a specimen of alcohol obtained from potatoes. It consisted, according to M. B., of 50 per cent. of ethylic alcohol, 15 in 1,000 of isopropylic alcohol, traces of propylic alcohol and of two varieties of amylic alcohol. He has made experiments with these varieties of alcohol on frogs. He finds that a watery solution of ethylic alcohol, 1 in 50, produces no injurious effects on the frog; a solution of the same strength of isopropylic alcohol kills them in a few hours;

a solution of same strength of propylic alcohol kills them in an hour, while a solution of the same strength of amylic alcohol kills them instantaneously. Amylic alcohol is in fact poisonous to frogs, he states, when used in the proportion of 1 pint to 500 parts of water. The frogs were subjected to the vapor of the solution. He insists on the differentiation of the affection known as alcoholism into two varieties: *Ethylism*, characterised by the laughing joviality of old Bacchus, and *Amylism*, or *Polyalcoholism*, which is characterised by the heavy stupidity arising from the modern whisky.

Hygiene of the Eye.—In the same session of the Society of Biology he presented the results of his researches on the well-being of the eye. He claims that if the number of near-sighted persons have increased in France, it is because sufficient attention has not been paid to the causes of the fatigue of that organ. Every one knows, he adds, that the eye soon becomes tired by looking at any article printed in squares of different colors. The same effect follows on reading from a book which remains fixed on the table, whereas if the book is held in the hands, and thus subject to a gentle motion, the fatigue is much less.

Black lines also on a white ground, such as are found in the majority of books, also fatigue the eye unnecessarily. A yellowish ground, he claims is the least fatiguing.

Another special cause of fatigue is reading of long lines.

In order to avoid the increase of myopia he suggests:

1. Let the light in the schools be abundant.
2. Let the type be large and on paper with a yellowish tint.
3. Lines of six centimeters in length are the least injurious.

PRACTICAL MEDICINE.

CHLORAL IN MALIGNANT CHOLERA.—(*Br. Med. Jour.*, Sept. 21, '78.)

Surgeon Major Hall of the Indian Army Service, reports at length a case of Asiatic cholera which had proceeded to a stage of extreme collapse, and which he successfully treated, as follows:

He used a solution of chloral, one in ten, and injected the equivalent of six grains, not simply under the skin, but deep into the substance of the muscles, changing the direction of the needle without withdrawing it from the skin. Improvement was manifest in a few minutes. In the course of eight hours thirty-two grains were thus injected, according to the urgency of the symptoms. Careful nursing and the exhibition of chloral *per os*, served to bring the case completely out of danger. Alcohol was scrupulously avoided. But little soreness followed the *deep* injections.

The writer argues that in this disease the arterial tension is much increased, and that as the cold stage comes on there is spasm of the muscular walls of the heart so strong that there is almost continuous systole. In deep, cholera collapse the heart sounds are inaudible, and pulse almost imperceptible. In such a condition of syncope as this, stimulants do absolute harm; their physiological antagonists are indicated, and hence the benefit rendered by the chloral in the above case.

SURGERY.

COTTON IMPREGNATED WITH CAMPHOR AND GLYCERINE FOR DRESSING WOUNDS.—M. Paoli. (*Journ. de Med. et Chi. prat. L' Union Médicale du Canada*, Jan., 1879.)

The author believes in the noxious influence of the air upon wounds, not only from the germs which it contains, but from the dust, and even the oxygen and nitrogen, and in general whatever it may contain. To protect wounds from its influence he recommends the following: wash the wounds with aqueous solution of carbolic acid, 1 part to five hundred; cover with a thick and large layer of cotton first moistened aud then impregnated with glycerine, the wound being first bathed with glycerine, and then sprinkled with powdered camphor. Over the wet cotton a thick layer of dry cotton is placed, and the dressing is rarely renewed, except the first few days when it may be re-applied every three or four days. Under this dressing the aspect of the wounds is

excellent, and the cicatrization goes on regularly and without accident.

As examples of the value of this treatment the author cites several interesting cases; a case of gun-shot wound of the scrotum, a penetrating wound of the skull, a fracture of the sacrum by gun-shot, the ball entering the pelvis, a compound fracture of the leg, a penetrating wound of the knee, amputation of the leg, etc., etc. In anfractuous wounds he injects glycerine.

A priori, this dressing which the author also applies to simple contusions should produce the good results proved by experience. Its three elements, camphor, glycerine and cotton, are all excellent protectors for wounds. Camphor is an excellent antiseptic. Glycerine is also of much value as a topical remedy. Guyon uses with all the precautions of the antiseptic method, cotton saturated with carbolized glycerine, and has excellent results.

DENTAL GRAFTING.—(*Archives Générales de Médecine*, Jan., 1879.)

We have already called attention to the inaugural thesis of Dr. David on dental grafting. (*Arch.*, Feb., 1878.) In support of the method exposed in his remarkable work, the author now communicates to the Academy a series of observations which testify to its value. Twenty times he has applied it to teeth recognized as incurable; he has had but one failure. To extract a tooth, subject it to an operation impracticable in the mouth, reinstate it in its alveola; such is the method the operator follows. In ten to twelve days, on an average, the tooth is grafted by the intermediary of the alveolo-dental periosteum, has regained its solidity, and is cured as well as the secondary affections of which it was the point of departure. This has been proved in an evident manner by one of the most interesting cases in which, with the view of reducing an anomaly of direction, a tooth had to be extracted and replaced twice; this case furnished the rare occasion of proving the renewal of the vascular connections of the pulp. Here then is an operation destined, thanks to these later labors, to transform dental therapeutics.

OBSTETRICS.

CASE OF DESQUAMATION OF THE EPIDERMIS IN A CHILD BORN ALIVE.—M. Charrier. (*L' Union Médicale*, Dec. 28, 1878.)

The following very rare case was reported by M. Charrier to the Société de Médecine. On July 9, 1878, I was called to a woman pregnant with her second child. The pregnancy had been normal, with the exception of a bronchitis treated by Dr. Millard. At one o'clock the pains which had occurred at rare intervals since morning, became more frequent, and I was called, arriving at half-past three. I found the lady already suffering the pains of expulsion, although the uterine orifice appeared to be only the size of a franc piece. The pains continued more and more violent, and at five and a half, a final pain of extreme force and duration expelled the head from the uterine orifice and beyond the vulva. The child was born with two circles of the cord around the neck, one of the loops passing under the right axilla and over the left shoulder like a scarf. The length of the cord was 83 centimeters. Half asphyxiated, pale as wax, it was only after stimulation for a minute or two with friction to the child that the child uttered its first cry. But what especially attracted my attention was the greenish red color of the umbilical cord, which was flattened like a ribbon, and appeared to belong to a dead-born child, long macerated in the waters of the amnion. Moreover, the entire epidermis of the body came away on the slightest friction, as in a macerated fœtus dead six or eight days. The epidermis of the foot was detached exactly like a glove.

The next day the epidermis had all fallen, except in two or three small places on the left leg, the back and the right arm. The child then had the natural color and temperature; it sucked with vigor, and, since, its health has been good.

I confess I have never seen a similar case; I have seen many cords greenish and withered, but never, in a living child, a desquamation like that which occurs in a fœtus long dead and macerated in the amniotic fluid.

I believe that if the labor had been delayed two or three days,

the child would have been born dead; but there a question in legal medicine presents itself: Can the fœtus, then, *before death*, become macerated in the waters of the amnion? Upon what does this desquamation of the entire epidermis depend? No eruptive disease, measles or scarlatina had been observed about the mother during her pregnancy. I remarked at the beginning that her pregnancy had been normal, except a bronchitis. To what, then, can we attribute the pathological state of the child? I will add, the membranes were very friable, and the same color as the cord, that is, reddish and greenish. The amniotic fluid had no odor. The placenta was healthy. It is evident that the fœtus suffered *in utero*, but the semi-asphyxiated state in which it was born is explained by the winding of the cord around the neck and chest. But this hindrance to circulation could not be the cause of the *macerative desquamation* before birth.

GYNÆCOLOGY.

INDICATIONS AND CONTRA-INDICATIONS FOR OVARIOTOMY IN THE TREATMENT OF OVARIAN CYSTS.—S. Duplay. (*Archives Générales de Médecine*, Jan., 1879.)

The following is the author's résumé of an interesting article on this subject:

1st. Before thinking of proposing the question of the indications and contra-indications of ovariotomy, the surgeon should have established as exact a diagnosis as possible, and have made an exploratory puncture.

2d. In relation to the time when ovariotomy should be proposed, I formally reject the early operation, and I believe that ovariotomy is only indicated when the cyst has become, by its volume, a cause of excessive inconvenience to the patient, or when it occasions, by local or general accidents, imminent danger to life.

3d. Late ovariotomy, although it should not be adopted, as a general rule, is not contra-indicated by the existence of the most grave local and general complications, such as peritonitis, inflammation, suppuration, gangrene of the cyst.

4th. Ovariotomy is absolutely contra-indicated in cases of cysts of the ovaries complicated by diseases, general or local, independent of the presence of the cyst, and capable of causing by their ulterior evolution the death of the patient.

5th. The divers local conditions dependent upon the state of the cyst (walls and contents), of its connections (adhesions), of the state of the peritoneum (ascites), are of but little importance as regards the indications and contra-indications of ovariotomy. I should, however, make two exceptions: first, relative to uniocular cysts, with serous contents, non-albuminous (cysts of the parovarium), in which ovariotomy, I think, as a general thing, is not indicated; second, relative to extensive adhesions to the uterus, bladder, rectum, etc., which, especially when accompanied by abundant ascites, often indicate a malignant affection. In these cases, without daring to prescribe ovariotomy absolutely, I would advise its postponement as long as possible.

6th. Finally, ovariotomy is applicable to cysts of the ovary complicated by pregnancy, when the life of the mother and child is directly menaced by the development of the tumor, and when tapping is without effect.

PATHOLOGY.

DERMOID CYST IN THE CEREBELLUM.—(*Br. Med. Jour.*, Nov. 30, '78.)

At a November meeting of the London Pathological Society, Dr. Irvine showed the brain of a child who was admitted into Charing Cross Hospital for partial loss of power in the lower limbs. She was seven years old, and the only history was that two or three years before she had received a severe blow on the back of the head. Soon after admission, she suffered from convulsions, occurring frequently till her death, three months later. Before death she presented a double internal strabismus and complete paraplegia.

Post mortem the dura was adherent to the skull and to the cerebellum. On cutting through it there escaped considerable semi-fluid, pus-like fluid, which was found to be sebaceous matter. In the fluid was found a tuft of hair. The cyst occupied both

halves of the cerebellum, and reached down to the cervical part of the cord. The neighboring parts were somewhat inflamed and softened. Dr. Irvine believed the presence of this dermoid substance in the brain could be explained by reference to the embryonic development of the parts.

The specimen was considered unique.

THERAPEUTICS.

JABORANDI IN PLEURITIC EFFUSIONS. — A. Laramée. (*L' Union Médicale du Canada*, January, 1879.)

Before coming to the main point, the author gives a brief history of this medicine. Jaborandi (*pilocarpus pinnatus*) is a shrub, 8 or 10 feet in height, with leaves alternate, pennate, compound, growing in the north of Brazil, near Pernambuco. It bears flowers and fruit, but up to the present, only the leaves, it seems, have been experimented with in therapeutics.

The active principle of jaborandi, pilocarpine, was discovered by Hardy in 1875. This alkaloid, known under the name of nitrate or muriate of pilocarpine, is high priced, but on the other hand an exceedingly small quantity, three centigrams, equals four grams of the leaves in infusion. The most common and economical plan of giving jaborandi is to give the infusion of the leaves, which is prepared by infusing four grams of the bruised leaves in a cup of boiling water for quarter of an hour, and give to the patient immediately afterward.

It is also given in the form of fluid extract in the dose of 30 drops to 4 grams, and in pills of 20 centigrams, each pill equaling 4 grams of the leaves. The muriate and nitrate of pilocarpine are often used for hypodermic injections in the proportions of 16 milligrams.

All the doses mentioned may be increased. The leaves furnish a large quantity of essential oil, but it has not yet been experimented with.

General opinion attributes the discovery of jaborandi to Dr. Continho, of Pernambuco. This gentleman having experimented

with it, and having recognized sialagogues and sudorific properties in a high degree, sent some samples to France in 1873.

The contradictory reports, which have circulated for some time, regarding the effects of jaborandi arise from the fact that a plant coming from South America and bearing the same name was confounded with the true plant, but it is now certain that the true species is the only one exported to Europe and the United States.

Prof. Gubler, at the Beaufon Hospital, Paris, experimented with it on a large scale, and some months later, MM. A. Robin, Vulpian, Hardy and several others carefully studied jaborandi, especially its physiological properties. All recognized in it a powerful action on the salivary and sudoriferous glands. Since then jaborandi is regarded as the most energetic sudorific and sialagogue with which we are acquainted.

Under the action of this medicine, five to fifteen minutes usually, but never later than twenty-five minutes after its administration, salivation and sweating take place and go on increasing. Salivation, which begins first, ceases generally at the end of two hours, and the sweating a little later. The patients are tormented by a continual spitting, and frequently by nausea, and even vomiting, especially if they swallow the saliva. The salivary glands are then more or less swollen and at times painful. Sweating is less marked in persons subject to gastric disorders and constipation, but more free in those subject to sweating.

The temperature of the body is not sensibly modified. Sometimes vertigo comes on, but it is only temporary.

M. Gubler has noticed secondary actions, such as hypersecretion, from the lachrymal glands, from the nasal membrane and from the pharyngeal, tracheal and bronchial glands.

M. A. Robin observed that the day of the experiment the urine diminished notably, but the day after there was a considerable increase. However, other things being equal, it may be said that the reduction of the amount of urine is not proportioned to the loss of fluids from the skin and salivary glands.

There is a marked antagonism between jaborandi and atropine. At the University College, London, they succeeded with 6 milligrams of nitrate of pilocarpine in producing an abundant saliva-

tion, and with 3-10 of a milligram of atropine it was arrested. At Paris, M. Vulpian succeeded in preventing salivation and sweating in one of his patients, to whom he had given a few minutes previously a milligram of sulphate of atropine.

One drop of solution of nitrate of pilocarpine (in the proportion of 65 milligrams to 30 grams of water) is sufficient to produce contraction of the pupil when dropped in the eye.

The above are the most important physiological properties of jaborandi. The author gives the two following cases to illustrate its action in pleuritic effusions.

The first case, in December, 1877, was that of a man aged 40 years, the subject of pleurisy for about 12 days. All the signs indicating inflammation of the left pleura were present; pain in the side, dry cough, early effusion, producing dullness, which changed its position with that of patient, absence of respiratory murmur, bronchial respiration, etc. He had recourse first to the classic treatment, emetic, vesicants, calmatives, etc. He finally tried jaborandi, 4 grams of the leaves infused for 15 minutes and given in one dose. Five minutes after, salivation began and lasted for nearly two hours. It was abundant; sweating less prominent, showing itself especially between the shoulders. There was some nausea, but no vomiting. The sensibility and swelling of the salivary glands were tolerably well marked. Nothing peculiar as regards secondary actions. The same day the patient felt much better, the dullness diminished sensibly and the respiration was more free. Two days after the signs indicating renewed effusion, a second dose was given, and this time the effusion disappeared permanently.

The second case was a lady of 40 years. She had latent effusion on the right side of six weeks standing when she entered the hospital. Jaborandi was given in the same dose and manner. The effusion was greater than in the first case. He had resource to jaborandi four times during twelve days. Sweating and salivation were abundant. There was some nausea and vomiting, swelling of salivary glands, and hypersecretion from lachrymal glands, and nasal membrane. A third and similar case was also cured in the same manner by the author. The author remarks that the first dose was more energetic than following ones. Pa-

tients should avoid exposure to cold during the sweating. After the disappearance of the effusion the friction of the pleura was very distinct.

Prof. Combal thus formulates the action of jaborandi in pleuritic effusions:

1. Jaborandi is very useful in the treatment of pleuritic effusions of whatever age or however abundant the liquid.

2. Jaborandi causes most often the liquid to disappear very rapidly, and the friction sounds to be heard.

3. The effects of jaborandi are of short duration; the liquid often reforms with great rapidity. It is necessary then to insist upon the use of jaborandi, and usually the liquid may be made to disappear permanently.

4. But when once the liquid has disappeared and the friction sounds have appeared, jaborandi becomes absolutely useless. We must then, more generally, to accomplish a cure, resort to tonic treatment and sometimes to local applications of tincture of iodine for example.

M. Dujardin-Beaumetz has employed jaborandi with success in albuminaria, in which there was general œdema, continual vomiting, and scarcely 60 grams of urine passed a day. An infusion of 6 grams of the leaves in 90 grams of water was given by the rectum, and produced an abundant salivation and sweating. The patient was improved promptly.

Jaborandi also finds a use in asthma, especially in the humid variety.

OIL OF AMBER.—(*Phil. Med. Times*, Oct. 26, 1878.)

Dr. Finck relates several cases of angina and functional cardiac disturbances, especially those cases into which the neuralgic element enters, which yielded rapidly to the influence of the oil of amber. He gave it in doses of from four to ten drops, repeated every thirty or forty minutes during a paroxysm, or in much smaller doses for continued use along with other remedies. In hysterical angina, also, and in the breast, pang of deep agony or grief, eight or ten drops of the oil, with some ordinary antispasmodic remedy every twenty minutes, will often give the happiest relief.

Items.

COMMENCEMENT EXERCISES OF RUSH MEDICAL COLLEGE.—The thirty-sixth annual Commencement exercises of Rush Medical College took place in the presence of a large audience in the Third Presbyterian Church of this city on the afternoon of the 25th of February. Out of one hundred and thirty-eight who entered the graduating class, one hundred and twenty-three received the degree of doctor of medicine. That so large a number failed to pass the examinations is no discredit to the gentlemen themselves, but we take it as an evidence that the professional attainments demanded by the college are higher than ever before, and as a consequence the class which has just graduated, taken as a whole, is just so much the better qualified to enter upon the duties of their profession.

The exercises were opened with prayer by the Rev. Theo. N. Morrison, Jr., after which followed the conferring of degrees; the charge of the President; response on behalf of the class by Dr. Charles E. Fogg, and the valedictory address by Dr. A. B. Strong. Following the valedictory address was the presentation by the class of a complete case of surgical instruments to Dr. Strong. Subjoined are the names of the graduates:

Chauncy Willard Amy, Marion J. Anderson, Erastus Yoemans Arnold, Samuel Bailey, Clarence Perley Battles, Rufus Henry Bartlett, Edwin Julius Bartlett, A.M., Robert Wesley Baker, Osron Dorcelia Benson, Stillman Marion Benner, Benjamin Jephthah Bill, William Thomas Bishop, Adelbert Henry Bowman, William Burgess Brengle, John Franklin Bradshaw, Charles Theodore Burchard, Martin Caldwell, Charles David Camp, James Cavaney, George Gillette Chittenden, William Wallace Cole, A.B., Albert Stewart Core, Charles John Creighton, Willis Edward Crane, Theodore Parker Crosse, Stephen Cummings, Charles Eustache Cyrier, John Oscar Dawson, Edward Davies,

James Blaney Devlin, Constantine Lomax Dicken, James Michael Dinnen, George Warritte Dosh, Cyrus Donaldson, Julian Arthur Dubois, Thaddeus Augustus Dumont, Karl Friedrick Wilhelm Eberlein, James Plaster English, Heman Ephram Farnsworth, Charles Elwin Fogg, A.B., Henry Jacob Fleischer, Thomas Benton Francis, Otto Tiger Freer, William Henry Harrison Gable, Benjamin Marvin Gill, Orris William Grant, Thomas Baldwin Graham, Bernard Charles Gudden, Addison Hawkins, Edward Leander Hills, William Wesley Hitchcock, Charles Henry Holmes, Elwyn Ashworth Holroyd, Harry Pettit Huntsinger, Henry Porter Johnson, Francis Marion Jordan, Samuel L. Kilmer, Charles Krusemarck, Antonio Lagorio, William Henry Lanyon, Fred Willard Lester, James Lonsdale, James Ancel Lord, Edward Macdonald, George Lemuel Marshall, Allan Aleyne Mathews, Edgar Jehial Meacham, William Meyer, Charles Frederick McComb, Hugh E. McCaw, John Wilkinson McCausland, John Calhoun McClintock, Charles William McGavren, Carroll Everard Miller, William Emil Julian Michelet, Albert Roscoe Mitchell, John Vincent Moran, Daniel Grove Moore, Harold Nicholas Moyer, Timothy Douglas Murphy, John Benjamin Murphy, Joseph Aloysius Muenich, John Tenbrook Newton, John Francis O'Keefe, John Walter O'Connor, Harlow N. Orton, William Enos Parker, Emery Allen Paschal, John Thompson Rice, Charles Winter Robbins, Charles Alexander Rogers, M.D., Joseph Louis Ross, Moses Archie Rush, B.S., Rockwood Sager, Ora Owen Sawyer, B.S., William Raymond Shinn, John Campbell Sheridan, Anton Shimonek, Courtney Smith, George Lewis Smith, William Theodore Frelinghuysen Smith, William Peter Smith, Francis Marion Smiley, Thomas Jefferson Sprague, Jr., Theodore Parker Stanton, Simon Strausser, George Charles Stockman, B.S., James Harrison Stipp, Charles Stuart, M.D., John H. Thornton, William Porter Verity, William Philander Walker, Solon Robertson Wakefield, James Wallace, Francis Alvin Weir, Florado Houser Wellcome, Frederick Charles Werner, PH.G., Herman L. Wilson, M.D., David Henry Worthington, Frank Rubin Woodard, Magnus Youngstedt. Honorary, Dr. J. H. Gardiner.

At half-past seven in the evening a largely attended reunion

of the alumni of the college took place at the Tremont House. This was the first union which has occurred since the disastrous fire of 1871, which not only destroyed the college and its records, but also the records of the Association, so that the addresses of its scattered members were lost, the constitution of the Association was burned and amid the general wreck none had found time to take the necessary steps toward reorganization. Recently Dr. J. H. Etheridge succeeded in obtaining the addresses of over twenty-two hundred of the alumni; a committee was appointed to discover the names of the old officers, and make the necessary preparations for the reunion. Invitations to a banquet were extended by the faculty of the college to all of the alumni of the college.

A partial copy of the old constitution had been found, and from it a new one was drafted, which was adopted. The President of the Association, Dr. C. Goodbrake, of Clinton, Illinois, who was elected in 1870, had been found, and he was present to preside at the reorganization. The officers elected for the ensuing year were: President, Dr. Robt. M. McArthur; 1st Vice President, Dr. Wm. Fox; 2nd Vice President, Dr. Harold N. Moyer; Secretary and Treasurer, Dr. E. Fletcher Ingals. Executive Committee, Drs. Norman Bridge, V. L. Hurlbut and F. A. Emmons.

After the business of reorganization had been accomplished, the retiring President delivered an able address which received the hearty endorsement of the members; after which the gentlemen adjourned to the banquet hall.

After the banquet the regular toasts were offered and responded to in a very happy manner.

Dr. Abner Hard in answer to the toast "Our Elder Brothers," gave a brief history of the early days of Alma Mater; Dr. E. W. Lee spoke for the County Hospital Staff; Dr. J. E. Owens gave a history of the spring faculty; Dr. Fox spoke in feeling terms for the alumni scattered throughout the length and breadth of the land; Dr. S. L. Kilmer spoke for the class of '79; Dr. V. L. Hurlbut responded to the toast "An old 'Rush,'" and Prof. J. Adams Allen for Alma Mater. The regular toasts being concluded, Dr. Goodbrake again took the chair and called for the unfinished business, under which head Dr. E. Ingals introduced

the following resolutions, which were ordered published, and at his request laid over until the next annual meeting for discussion.

The Alumni Association of the Rush Medical College desire to express in a formal and public manner the affectionate regard which they entertain for their Alma Mater, their pride in her past history, and their confident hopes for her increased usefulness in the future. We hold that her supreme duty to the public, which has always accorded her a generous support, demands that her first aim and object should be to aid in axalting the attainments of the medical profession, and by so doing increasing its usefulness, power and respectability. As a mode of accomplishing these results we would respectfully offer to the Board of Trustees of the College, the following suggestions:

First.—To increase the regular annual term of college instruction to a period of not less than nine months.

Second.—To require attendance on three full terms of medical lectures as a pre-requisite to admission to examination for the degree of Doctor of Medicine.

Third.—To institute preliminary examinations for students who apply for matriculation to the school, admitting only such as have at least a thorough English education.

The miscellaneous business was followed by impromptu speeches from several gentlemen. Many instructive and witty remarks were made which we are unable to publish. Dr. Etheridge suggested that a portion of the annual dues be appropriated for prizes, for the encouragement of original investigation. Dr. Gunn stated that the Faculty of the college considered, and should at all future reunions consider the association as their guests, and should therefore insist upon defraying all the expenses of the banquet.

Adjourned to meet again commencement eve, 1880.

THE following new chairs have been established by the Trustees and Faculty of Rush Medical College, and filled by appointments of the gentlemen named:

A professorship of Gynæcology—Dr. Wm. H. Byford.

A professorship of Orthopædic Surgery—Dr. Jno. E. Owens.

A professorship of Dermatology—Dr. James Nevins Hyde.

TWENTIETH COMMENCEMENT EXERCISES OF THE CHICAGO MEDICAL COLLEGE.—MEDICAL DEPARTMENT OF NORTHWESTERN UNIVERSITY.

The twentieth annual Commencement of this college was held in the Plymouth Church, on the afternoon of March 4th, 1879. The church was well filled with an interested audience. The platform, which was tastefully decorated with flowers, was occupied by the Faculty and some of the Trustees of the University, and the front central pews by the members of the graduating class. Prayer was offered by the Rev. Dr. Everest. Certificates for the undergraduates, and for hospital and dispensary service, were distributed; and the degree of Doctor of Medicine was conferred upon the members of the graduating class by Prof. N. S. Davis, Dean of the Faculty, aided by the recording secretary, Prof. L. Curtis. A very appropriate valedictary address was delivered by Prof. S. J. Jones, and an unusually excellent response in behalf of the class, by F. E. Stevens, M.D. The first prize for the best inaugural thesis was awarded to Charles Herbert Fegers, whose thesis contained an excellent account of *A New Spinal Supporter*, devised by himself. The second prize was awarded to Henry Clay Mitchell, for a thesis on the *Peristaltic Action or Motion of the Mesenteric Blood-vessels.* At suitable intervals throughout the exercises, excellent music was given by Benj. Owen, the organist and by the Blaney Quartette. The following are the names of the graduating class: John Francis Abel, Burton B. Aplington, Charles Henry Bryant, Ed. Livingston Cary, Lorents Andreas Claussen, Shobel Vail Clevenger, Francis Jewell Crane, Charles Herber Fegers, Adalbert R. Fellows, William Griggs Goffe, Omar Oakley Hall, Everett Charles Hartley, Dennis John Hayes, Ernest Clark Helm, William Malcolm Jackson, Hugh Lawrence Jenks, Homer L. Leland, Thomas Smith McDavitt, Matthew Harrison McKillip, Henry Clay Mitchell, William David Morgan, John Francis Mulholland, Penn Walker Ransom, William Henry Roberts, George William Robinson, William Henry Schick, Smith Augustus Spilman, Frank Eugene Stevens, John Stout, Norton Strong, Abraham Lukert Thomas, Robert VanDeusen, John M. Wilcox, William Calvert Wolf, Ansel Woodworth, George Harvey Wright. To these were added

the names of Robert H. Brown and Henry W. Waldeman, examined at the close of the first term of the college year; and Philemon D. Harding, of Goshen, Indiana, on whom was conferred the Honorary Degree of M.D., making *thirty-eight* regular degrees out of a total class of students numbering one hundred and fifty-six.

ALUMNI ASSOCIATION:

The thirteenth annual re-union of the Alumni Association of the Chicago Medical College was held at the Palmer House in the evening of the same day. An unusually large number of members of the association were present, and the proceedings were of an interesting and important character. Dr. N. Senn, of Milwaukee, presided. A brief address of welcome was delivered by Dr. Blanchard, in behalf of the committee of arrangements, and the proceedings of the last meeting were read by the secretary, Dr. D. A. K. Steele. A large number of new members were initiated, and a very interesting necrological report was read by Prof. M. P. Hatfield. The president, Dr. N. Senn, delivered a very interesting and valuable address on the importance of the thorough study of anatomy. The Association took some important action, not only earnestly endorsing the long and graded course of instruction established by the college, but affording substantial aid in adding to the appliances and usefulness of the physiological laboratory. After the business of the Association had been transacted, an elegant banquet was enjoyed in the usual manner until a late hour.

ANNUAL MEETING OF ILLINOIS STATE MEDICAL SOCIETY.—The regular annual meeting of the Illinois State Medical Society will be held at Lincoln, Illinois, commencing at 10 o'clock, a. m., of Tuesday, May 20th, 1879, and continue two or three days. The local committee of arrangements will make all proper efforts to render the meeting pleasant and profitable to all who may attend. The following standing and special committees are expected to report:

Committee of Arrangements.—Drs. R. P. Wilson, C. T. Wilbur, L. L. Leeds, P. L. Diefenbacker and N. S. Reed.

Committee on Practical Medicine.—Drs. G. W. Jones, J. T. Crow and L. B. Moore.

Committee on Surgery.—Drs. John E. Owens, H. H. Deming and H. Z. Gill.

Committee on Obstetrics.—Drs. C. C. Hunt, David S. Booth and W. M. Kaul.

Committee on Gynæcology.—Drs. T. D. Fitch, P. L. Diefenbacker and N. Bridge.

Committee on Ophthalmology and Otology.—Drs. S. J. Jones, J. Perrin Johnson and H. B. Young.

Committee on Drugs and Medicines.—Drs. J. F. Todd, C. B. Johnson and John Wright.

Committee on Necrology.—Drs. T. F. Worrell, G. W. Albin and E. Ingals.

Committee on Syphilis.—Dr. W. M. Chambers.

Committee on Psychological Medicine.—Dr. A. McFarland.

Committee on the Advancement of Physical Science.—Dr. S. H. Stevenson.

Committee on Croup.—Dr. H. Z. Gill.

Committee on Use of Hydrate of Chloral and Bromide of Ammonium in Obstet. Practice.—Dr. C. H. Norris.

Committee on Medical Education.—Drs. E. Ingals, R. G. Bogue and D. Prince.

Each permanently organized local medical society is entitled to one delegate for every five of its resident members; the faculty of each regular medical college is entitled to two delegates; and the staff of every chartered or municipal hospital to one delegate. It is hoped that the profession of the entire State will be well represented at the coming meeting.

N. S. DAVIS, *per. Secretary.*

CHICAGO, ILL., March 15th, 1879.

A LETTER has been received by the Illinois State Board of Health from Göttingen, Germany, asking whether there is such a medical school as the University of Medicine and Surgery of Haddenfield, New Jersey. It seems that a diploma of this institution was presented by a veterinary surgeon in Berlin, who was trying to get a German degree, but owing to the fact that German uni-

versities have a rule that a degree from a small one is to be held equal, and therefore not to be superceded by a degree from a large institution, this university refused to grant another degree. A copy of the *Göttinger Zeitung* was also received, containing a copy of the diploma, and, as was supposed by Prof. Schwarz, it proves to be fraudulent, as there is no school of this character at Haddenfield. The letter also states that there is an agency in Germany for the sale of spurious diplomas.

VITAL STATISTICS.—CHICAGO, March 15, 1879. *Dear Sir:* At the last meeting of the West Chicago Medical Society, the resolution given below was discussed and adopted with great unanimity. We hope that you will take an early opportunity to secure its consideration by your local or county medical society, and also by the State Medical Society.

NORMAN BRIDGE, M.D., *Prest. West Chicago Med. Soc'y.*

W. T. BELFIELD, M.D., *Secretary.*

Resolved, That in the opinion of the West Chicago Medical Society, it is the duty of the State Board of Health to procure an amendment of the law relating to the collection of Vital Statistics, securing the incorporation of those sections of the New Hampshire and Connecticut laws which provide for the compensation of persons who make returns of births and deaths, at the rate of twenty-five cents for each birth or death returned and recorded within the limits of the State.

THE sudden death of Dr. Jno. M. Woodworth, late Supervising Surgeon General of the United States Marine Hospital Service, is already known to many of our readers, from the general publicity which the event has occasioned. Dr. Woodworth, as is well known, was a physician of this city, and his professional associates and friends in Chicago have felt, even more keenly than others, the loss his death has occasioned to the roll of honor in the profession of this city, as well as to the public service.

We propose to publish, at an early date, a fit memorial of his life and character.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, April 7 and 21.

West Chicago Medical Society—Mondays, April 14 and 28.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.

Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.

Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.

Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.

Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.

Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.

Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.

Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.